

LPDES PERMIT NO. LA0112836 (Agency Interest No. 83623)

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

I. **Company/Facility Name:** Acadia Power Partners, L.L.C.
Acadia Power Station
30385 Crowley-Eunice Highway
Eunice, Louisiana 70535

II. **Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

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Date Prepared: October 6, 2005

IV. Permit Action/Status:

A. **Reason For Permit Action:**

Reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46*.

* In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401-402, and 404-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

B. **LPDES permit:** Effective Date -- August 1, 2000
Expiration Date – July 31, 2005

C. LPDES application received on February 4, 2005.

V. Facility Information:

A. Location – 30385 Crowley-Eunice Hwy, Eunice, Acadia Parish
(Latitude 30°25'55", Longitude 92°24'40").

B. Applicant Activity - According to the application, the Acadia Power Station is an existing 1000 megawatt combined-cycle turbine power plant. The plant consists of four combustion turbines, four heat recovery steam generators (HRSG), four duct burners, two steam turbines, two cooling towers, power augmentation (PAG), and auxiliary equipment.

The raw water supply to the power plant comes from a combination of several deep wells on the property and water from Bayou Mallet.

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401-402, and 404-471 have been adopted by reference at LAC 33:IX.4903)

<u>Guideline</u>	<u>Reference</u>
Steam Electric Power Generating	40 CFR 423

Other sources of technology based limits:

- Best Professional Judgement

D. Fee Rate -

1. Fee Rating Facility Type: Major
2. Complexity Type: IV
3. Wastewater Type: III
4. SIC code: 4911

E. Continuous Facility Effluent Flow - 1.83 MGD

VI. Receiving Waters: local drainage thence to Bayou Mallet

A. TSS (15%), mg/L: 30.6

B. Average Hardness, mg/L CaCO₃: 95.1

C. Critical Flow, cfs: 0.1

D. Mixing Zone Fraction: 1

E. Harmonic Mean Flow, cfs: 1

F. River Basin: Red River, Segment No.: 050103

G. Designated Uses:

primary contact recreation, secondary contact recreation, fish and wildlife propagation, agriculture

Information based on recommendations from the Engineering Section. Hardness and 15% TSS data come from site # 2218 located at the bridge on La. Highway 13, 3.6 miles south of Eunice.

VII. Outfall Information:

Outfall 001

- A. Type of wastewater – The continuous discharge of cooling tower blowdown including previously monitored wastestreams from Internal Outfalls 101 and 201
- B. Location – At the point of discharge from the weir box located in the southwest corner of the property prior to combining with other waters (Latitude 30°25'36", Longitude 92°24'49").
- C. Treatment – None
- D. Flow – Continuous, 1.83 MGD
- E. Receiving waters – Local drainage thence to Bayou Mallet
- F. Basin and segment – Mermentau River Basin, Segment 50103
- G. Effluent data – Outfall 001 from the current permit represents the combined discharge of cooling tower blowdown (from internal Outfall 101) and multiple low volume wastewater sources (from internal Outfall 201). However, while building the power station, the company routed most of the low volume wastewater sources described in the permit for Outfall 201 into the cooling tower basin. Therefore, the attached effluent data from the February 4, 2005 LPDES permit application (Appendix A) for Outfall 101, represents data from the combined discharge of cooling tower blowdown and low volume wastewater. The attached effluent data (Appendix A) from the LPDES application for Outfall 001 represents data from the combined discharge of cooling tower blowdown, low volume wastewater and green sand filter backwash.

Outfall 101

- A. Type of wastewater – The intermittent discharge of RO-EDI Reject, plant service water/plant drains, neutralized corrosive drains, combined HRSG blowdown, and miscellaneous low volume wastewaters including but not limited to raw water pretreatment, excess condensate, steam condensate drain and steam drains tank, and analyzer slip-streams
- B. Location – at the point of discharge from the final outfall weir box prior to combining with other wastewaters. (Latitude 30°25'43", Longitude 92°24'43").

- C. Treatment – RO-EDI reject: dechlorination; plant service water/plant drains: oil/water separator and dechlorination; neutralized corrosive drains: neutralization and dechlorination; combined HRSG blowdown: dechlorination; misc low volume wastewaters: dechlorination
- D. Flow – Intermittent, 0.49 MGD
- E. Receiving waters – Local drainage thence to Bayou Mallet
- F. Basin and segment – Mermentau River Basin, Segment 050103
- G. Effluent data – Outfall 101 from the current permit represents the internal outfall for cooling tower blowdown only. However, while building the power station, the company routed the low volume wastewater sources described above for Outfall 101 (which includes the majority of the wastewaters actually permitted for discharge through Outfall 201) into the cooling tower basin. Therefore, the attached effluent data from the February 4, 2005 LPDES permit application (Appendix A) for Outfall 101, represents data from the combined discharge of cooling tower blowdown and low volume wastewater.

Outfall 201

- A. Type of wastewater – The intermittent discharge of green sand filter backwash
- B. Location – At the point of discharge from the green sand filter backwash tank prior to discharge to the facility's water reservoir or at the point of discharge into the Outfall 001 weir box (Latitude 30°25'40", Longitude 92°24'42").
- C. Treatment – Settling
- D. Flow – Intermittent, 0.15 MGD
- E. Receiving waters – Local drainage thence to Bayou Mallet
- F. Basin and segment – Mermentau River Basin, Segment 050103
- G. Effluent data – See attached pages from the February 4, 2005 LPDES permit application (Appendix A).

Outfall 002

- A. Type of wastewater – Non-process area and process area stormwater runoff, maintenance wastewaters including fire protection system test water, hydrostatic test water, equipment and general facility washwater, safety shower/eye wash test water, cooling tower mist, and air conditioner condensate

- B. Location – At the point of discharge from the drainage ditch that runs along the north side of the process area prior to combining with the drainage ditch that runs along the western property line (Latitude 30°25'46", Longitude 92°24'44").
- C. Treatment – None
- D. Flow – Flow is intermittent
- E. Receiving waters – Local drainage thence to Bayou Mallet
- F. Basin and segment – Mermentau River Basin, Segment 050103
- G. Effluent data – See attached pages from the February 4, 2005 LPDES permit application (Appendix A).

VIII. Proposed Permit Limits and Rationale:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. CHANGES FROM THE PREVIOUS PERMIT

1. Outfall 003 - Prior to construction of the site, it was believed that Outfall 003 would drain portions of the process area. However after the site was completed, the Outfall only drained grassy areas. No activities associated with industrial activities take place in this area, and no permit excursions have been reported for Outfall 003. Therefore, Outfall 003 has been removed from the permit.
2. Outfalls 001, 101 and 201 - In the draft renewal permit, Final Outfall 001 has been changed to combine the limitations established at the former Internal Outfall 101 and the limitations established at Final Outfall 001. The plant was constructed to allow recycling of low volume wastewaters (previously permitted under Internal Outfall 201) by placing them in the cooling tower basin to be reused as cooling makeup water. In accordance with 40 CFR 423, the draft permit requires internal sampling of these low volume wastewaters (at Outfall 101 prior to combining with waters in the cooling tower basin). In addition, the permittee proposes to begin discharging green sand filter backwash into the facility's water reservoir. The water in the reservoir is used as makeup water for the facility. In accordance with 40 CFR 423, the draft permit requires internal sampling of the green sand filter backwash (at Outfall 201

prior to discharge into the reservoir). The permit also gives the permittee the flexibility to discharge the green sand filter backwash via the original Outfall 201 discharge point (at the point of discharge into the Outfall 001 weir box).

3. Therefore, in the draft renewal permit, there are two internal outfalls for low volume wastewater.
4. Outfall 001 – Mass effluent limitations for free available chlorine, and total chromium have increased due to the increase in flow from the cooling towers.
5. Outfall 001 – Several changes have been made to the biomonitoring requirements:
 - (a) A toxicity wet limit has been added to the permit due to the failures that have occurred over the life of the initial permit.
 - (b) The monitoring frequency reduction option has been removed from the permit.
 - (c) The toxicity dilution series has changed due to the change of flow and the use of default 7Q10 and Harmonic mean values (in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, Water Quality Management Plant Volume 3).
6. Outfall 002 - Safety shower/eye wash test water, cooling tower mist and hydrostatic test water have been added to the list of wastewaters for Outfall 002.
7. Water quality limitations have been established at Outfall 001 for Total Zinc, Total Cyanide and Total Sulfate. A compliance schedule has been included in the permit as per LAC 33:IX.1109.D.1
8. Continuous monitoring requirements have been added at Outfall 001 for Temperature, Flow and pH.
9. In accordance with current Office policy, Stormwater Pollution Prevention Plan Requirements have been added to the permit.

B. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII.

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The Acadia Power Station is subject to New Source Performance Standards (NSPS) effluent limitation guidelines listed below:

<u>Manufacturing Operation</u>	<u>Guideline</u>
Steam Electric Power Generating	40 CFR 423 (New Source Performance Standards)

Proposed effluent limitations and basis of permit limitations are found below:

OUTFALL 001 INTERIM EFFLUENT LIMITATIONS:

Outfall 001 – Cooling tower blowdown including previously monitored wastestreams from Internal Outfalls 101 and 201

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	<i>Monthly Avg</i>	<i>Daily Max</i>		
Flow	Report	Report	Continuous	LAC 33:IX.2707.I.1.b, previous permit
pH	Continuous ⁽¹⁾	Continuous ⁽¹⁾	Continuous	40 CFR 423.15(a), previous permit
Temperature	Report	97°F	Continuous	LAC33:IX.1123 & LAC33:IX.1113(C)(4), previous permit
Free Available Chlorine	0.2 mg/l : 3.1 lbs/day ⁽²⁾	0.5 mg/l : 7.6 lbs/day ⁽²⁾	1/week	40 CFR 423.15(j)(1), previous permit
Total Chromium	0.2 mg/l : 3.1 lbs/day	0.2 mg/l : 3.1 lbs/day	1/year ⁽³⁾	40 CFR 423.15(j)(1), previous permit
Total Zinc	1.0 mg/l : 15.3 lbs/day ⁽²⁾	1.0 mg/l : 15.3 lbs/day ⁽²⁾	1/month	40 CFR 423.15(j)(1), previous permit
Total Cyanide	Report	Report	1/month	BPJ
Total Sulfate (as SO ₄)	Report	Report	1/month	BPJ
Biomonitoring	See Section D (Biomonitoring Requirements) below	See Section D (Biomonitoring Requirements) below	1/3 months	See Section D (Biomonitoring Requirements) below

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- (1) Where a permittee continuously measures the pH of wastewater as a requirement, the permittee shall maintain the pH of such wastewater within the range set forth in the permit, except that excursions from the range are permitted, provided:
 - a) The total time during which the pH values are outside the required range of pH values shall not exceed 446 minutes in any calendar month; and
 - b) No individual excursion from the range of pH values shall exceed 60 minutes.
- (2) In accordance with 40 CFR 122.45(f), mass limitations are applied.
- (3) The monitoring frequency of 1/year has been established since compounds containing chromium will not be used in the cooling towers.

OUTFALL 001 FINAL EFFLUENT LIMITATIONS – beginning 3 years from the permit effective date:

Outfall 001 – Cooling tower blowdown including previously monitored wastestreams from Internal Outfalls 101 and 201

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	Daily Max		
Flow	Report	Report	Continuous	LAC 33:IX.2707.I.1.b, previous permit
pH	Continuous ⁽¹⁾	Continuous ⁽¹⁾	Continuous	40 CFR 423.15(a), previous permit
Temperature	Report	97°F	Continuous	LAC33:IX.1123 & LAC33:IX.1113(C)(4), previous permit
Free Available Chlorine	0.2 mg/l : 3.1 lbs/day ⁽²⁾	0.5 mg/l : 7.6 lbs/day ⁽²⁾	1/week	40 CFR 423.15(j)(1), previous permit
Total Chromium	0.2 mg/l : 3.1 lbs/day	0.2 mg/l : 3.1 lbs/day	1/year ⁽³⁾	40 CFR 423.15(j)(1), previous permit
Total Zinc	0.2 mg/l : 3.16 lbs/day ⁽²⁾	0.49 mg/l : 7.5 lbs/day ⁽²⁾	1/month	Water quality based effluent limitation
Total Cyanide	0.0037 mg/l : 0.057 lbs/day ⁽²⁾	0.0088 mg/l : 0.135 lbs/day ⁽²⁾	1/month	Water quality based effluent limitation

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Total Sulfate (as SO ₄)	28.1 mg/l: 430 lbs/day ⁽²⁾	66.9 mg/l: 1021 lbs/day ⁽²⁾	1/month	Water quality based effluent limitation
Biomonitoring	See Section D (Biomonitoring Requirements) below	See Section D (Biomonitoring Requirements) below	1/3 months	See Section D (Biomonitoring Requirements) below

- ⁽¹⁾ Where a permittee continuously measures the pH of wastewater as a requirement, the permittee shall maintain the pH of such wastewater within the range set forth in the permit, except that excursions from the range are permitted, provided:
 - a) The total time during which the pH values are outside the required range of pH values shall not exceed 446 minutes in any calendar month; and
 - b) No individual excursion from the range of pH values shall exceed 60 minutes.
- ⁽²⁾ In accordance with 40 CFR 122.45(f), mass limitations are applied.
- ⁽³⁾ The monitoring frequency of 1/year has been established since compounds containing chromium will not be used in the cooling towers.

Outfall 101 - RO-EDI Reject, plant service water/plant drains, neutralized corrosive drains, combined HRSG blowdown, and miscellaneous low volume wastewaters including but not limited to raw water pretreatment, hydrostatic test water, excess condensate, steam condensate drain and steam drains tank, and analyzer slip-streams

Outfall 201 – Green sand filter backwash

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	Daily Max		
Flow	Report	Report	1/day	LAC 33:IX.2707.I.1.b, previous permit
Oil & Grease	15 mg/l ⁽¹⁾	20 mg/l ⁽¹⁾	1/week	40 CFR 423.15(c), previous permit
TSS	30 mg/l ⁽¹⁾	100 mg/l ⁽¹⁾	1/week	40 CFR 423.15(c), previous permit

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- (1) In accordance with 423.15(m), limitations for TSS and Oil & Grease are established in concentration only.

Outfall 002 - Non-process area and process area stormwater runoff, maintenance wastewaters including fire protection system test water, hydrostatic test water, equipment and general facility washwater, safety shower/eye wash test water, cooling tower mist, and air conditioner condensate

Parameter	Effluent Limitations		Monitoring Freq.	Reference
	Monthly Avg	Daily Max		
Flow	Report	Report	1/day	LAC 33:IX.2707.I.1.b, previous permit
TOC	---	50	1/month	Previous permit
Oil & Grease	15	20	1/month	BPJ, 40 CFR 423.15, previous permit
pH	6.0 s.u. (Min)	9.0 s.u. (Max)	1/month	BPJ, 40 CFR 423.15(a), previous permit

B. MONITORING FREQUENCIES

All monitoring frequencies are based upon best professional judgement and are consistent with frequencies previously applied to other major steam electric generating facilities. Whole Effluent Toxicity testing frequency is based upon recommendations from the Municipal and General Water Permits Section (see Appendix B).

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. Calculations, results, and documentation are given in Appendix C.

In accordance with 40 CFR § 122.44 (d)(1)/LAC 33:IX.2707.D.1, the existing (or potential) discharge(s) was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001, to

determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix C.

The following pollutants received water quality based effluent limits:

Total Zinc
Total Cyanide
Total Sulfate

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. They are also listed in Part II of the permit.

To further ensure compliance with 40 CFR 122.44(d)(I), whole effluent toxicity testing has been established for Outfall 001 (See Section VIII.D below).

D. BIOMONITORING REQUIREMENTS

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall 001 are as follows:

<u>TOXICITY TESTS</u>	<u>FREQUENCY⁽¹⁾</u>
NOEC, Pass/Fail [0/1], Lethality, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	1/3 months
NOEC, Value [%], Lethality, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	1/3 months

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NOEC, Value [%], Growth, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	1/3 months
NOEC, Pass/Fail [0/1], Growth, Static Renewal, 7-Day Chronic, <u>Pimephales promelas</u>	1/3 months
NOEC, Value [%] Coefficient of Variation, Static Renewal 7-Day Chronic, <u>Pimephales promelas</u>	1/3 months
NOEC, Pass/Fail [0/1], Lethality, Static Renewal 7-Day Chronic, <u>Ceriodaphnia dubia</u>	1/3 months
NOEC, Value [%], Lethality, Static Renewal, 7-Day Chronic <u>Ceriodaphnia dubia</u>	1/3 months
NOEC, Value [%], Reproduction, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	1/3 months
NOEC, Pass/Fail [0/1], Reproduction, Static Renewal, 7-Day Chronic, <u>Ceriodaphnia dubia</u>	1/3 months
NOEC, Value [%] Coefficient of Variation, Static Renewal 7-Day Chronic, <u>Ceriodaphnia dubia</u>	1/3 months

- (1) The permittee must collect the 24-hour composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis. However, if no biofouling agent or chlorine is used during the monitoring period, the permittee must still conduct the required quarterly testing.

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Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to this Office. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 97%, 72%, 54%, 41%, and 31%. The low-flow effluent concentration (critical dilution) is defined as 97% effluent.

IX. Compliance History/DMR Review:

The Acadia Power Station was issued a Consolidated Compliance Order and Notice of Potential Penalty on December 24, 2002. The order noted the following violations: several effluent limitation excursions from the period March 2002 through October 2002, failure to measure daily temperature during the months of March and August 2002, failure to monitor for TSS and Oil & Grease in the first week of March 2002, and toxicity failures for the months of June and July 2002. Since issuance of the order, the permittee has been submitting quarterly progress reports. However, the compliance order is still open.

A Discharge Monitoring Report review was done for the period of January 2002 until September 2005. The following reported permit excursions were noted:

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<u>Date</u>	<u>Parameter</u>	<u>Outfall</u>	<u>Reported Value</u>	<u>Permit Limits</u>
5/31/02	TSS	201	48.6 : 166 mg/l	30 : 100 mg/l
6/30/02	FAC	101 (CTBD)	4.62 : 11.77 lbs/day 0.237 : 0.72 mg/l	1.9 : 4.8 lbs/day 0.2 : 0.5 mg/l
7/31/02	FAC	101 (CTBD)	5.36 : 19.8 lbs/day 0.28 : 0.69 mg/l	1.9 : 4.8 lbs/day 0.2 : 0.5 mg/l
8/31/02	FAC	101 (CTBD)	0.21 : 0.79 mg/l	0.2 : 0.5 mg/l
10/31/02	FAC	101 (CTBD)	0.25 mg/l (Mthly Avg)	0.2 mg/l (Mthly Avg)
12/31/02	pH	001	9.4 s.u. (Max)	9.0 s.u. (Max)
7/31/04	FAC	101 (CTBD)	0.23 mg/l (Mthly Avg)	0.2 mg/l (Mthly Avg)
12/31/04	TSS	201	36.75 : 127 mg/l	30 : 100 mg/l
2/28/05	Oil & Grease	201	16.1 : 49.4 mg/l	15 : 20 mg/l

Since the effective date of the permit, the permittee has reported 1 failure of the Pimephales Promelas species, and 21 failures of the Ceriodaphnia Dubia species.

IX. Endangered Species:

The receiving waterbody, Subsegment 050103 of the Mermentau River Basin are not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 21, 2005 from Watson (FWS) to Gautreaux (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

X. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XI. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in the application.

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XII. Variances:

No requests for variances have been received by this Office.

XIII. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

A public notice will be published in a local newspaper of general circulation and in the Office of Environmental Services Public Notice Mailing List

XV. TMDL Waterbodies:

Subsegment 050103, is not listed on LDEQ's Final 2004 303(d) list as impaired. However, Subsegment 050103 was previously listed as impaired for suspended solids, turbidity, TSS/turbidity/siltation, nutrients, ammonia, DO/nutrients/ammonia, and phosphorus, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for Subsegment 050103:

- Total Maximum Daily Load for TSS, Turbidity and Siltation for the Mermentau River Basin (May 3, 2001)
- Bayou Mallet TMDLs for Dissolved Oxygen, Nutrients, and Ammonia (April 19, 2002)

TSS, Turbidity, Siltation

In the TMDL for TSS, Turbidity and Siltation for the Mermentau River Basin, it is stated that point sources do not represent a significant source of TSS. Because the point sources are minor contributors and discharges of organic suspended solids from point sources are already addressed by LDEQ through their permitting of point sources to maintain water quality standards for DO, the wasteload allocations for point source contributions were set to zero. This TMDL only

addresses the landform contribution of TSS/sediment and does not address the insignificant point source contributions. Therefore, no further permit limitations are established in this permit.

DO/Nutrients/Ammonia and Phosphorus

The Bayou Mallet TMDL for Dissolved Oxygen, Nutrients, and Ammonia was modeled explicitly for the City of Eunice WWTP, because there were no other significant contributors of oxygen demanding substances within the watershed. The wastewaters from the Acadia Power Station are not likely to contain pollutant levels of nutrients, ammonia, phosphorus or DO that would cause further impairment of the receiving waterbody. Since the TMDL did not assign a wasteload allocation or require reductions for Acadia Power Station, no effluent limitations for nutrients, ammonia or DO have been included in the permit.

XVI. 316(b) Requirements:

The Acadia Power Station is existing electric generating facility that operates a cooling water intake structure on a manmade tributary to Bayou Mallet. The intake structure has a design capacity of approximately 21 MGD. In preparing the renewal LPDES permit for the Acadia Power Station, this Office determined that in accordance with 40 CFR 125.91(a) and LAC 33:IX.4733, the facility is not regulated by the 316(b) Phase I or Phase II rule for cooling water intake structures because it is an existing facility that has a design intake capacity of less than 50 MGD.

XVII. Stormwater Pollution Prevention Plan (SWP3) Requirements:

In accordance with LAC 33:IX.2707.I.3 and 4 [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all stormwater discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, that plan could be incorporated by reference into the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasure Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of storm water associated with industrial activity, as defined at LAC 33:IX.2511.B.14 [(40 CFR 122.26(b)(14)].

Appendix A

Effluent data

Outfall 001

Historical Data for Outfall 001
Water Discharge Permit LA0112836

Monitoring Period	Flow		Temperature		pH	
	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Min	Max
	(MGD)		(°F)		(SU)	
1/1/02 thru 1/31/02	ND	ND	ND	ND	ND	ND
2/1/02 thru 2/28/02	ND	ND	ND	ND	ND	ND
3/1/02 thru 3/31/02	0.149	0.375	70.5	78.9	7.29	7.87
4/1/02 thru 4/30/02	0.337	0.500	72.02	84.70	7.1	8.61
5/1/02 thru 5/31/02	0.1841	0.550	77.26	97.00	7.28	8.47
6/1/02 thru 6/30/02	0.9156	2.087	79.17	92.90	7.55	8.94
7/1/02 thru 7/31/02	1.1175	3.576	82.55	88.70	6.33	8.37
8/1/02 thru 8/31/02	0.6204	1.1372	79.48	86.10	7.30	8.75
9/1/02 thru 9/30/02	0.681	1.52	79.84	85.30	6.58	8.65
10/1/02 thru 10/31/02	0.363	1.14	73.90	82.10	7.51	8.64
11/1/02 thru 11/30/02	0.141	0.47	64.21	71.30	7.64	8.38
12/1/02 thru 12/31/02	0.252	1.01	59.01	67.90	7.36	9.40
1/1/03 thru 1/31/03	0.371	1.32	61.30	67.60	6.82	8.70
2/1/03 thru 2/28/03	0.268	0.767	64.57	76.40	7.19	8.34
3/1/03 thru 3/31/03	0.292	0.549	65.50	71.70	7.18	8.68
4/1/03 thru 4/30/03	0.146	0.775	68.20	73.50	7.37	8.61
5/1/03 thru 5/31/03	0.346	0.597	74.90	79.70	7.26	8.58
6/1/03 thru 6/30/03	0.619	3.50	78.50	83.60	7.16	8.57
7/1/03 thru 7/31/03	1.00	2.44	77.27	84.40	7.78	8.37
8/1/03 thru 8/31/03	1.03	3.52	80.98	89.73	7.12	8.38
9/1/03 thru 9/30/03	0.945	2.37	78.30	83.43	6.79	8.19
10/1/03 thru 10/31/03	0.950	1.44	71.50	77.80	7.02	8.40
11/1/03 thru 11/30/03	0.619	1.30		81.32	6.91	8.44
12/1/03 thru 12/31/03	0.369	0.798	61.83	68.89	6.23	8.64
1/1/04 thru 1/31/04	0.285	0.612	62.38	73.00	7.14	8.42
2/1/04 thru 2/29/04	0.442	0.870	63.20	72.37	6.71	8.35
3/1/04 thru 3/31/04	0.548	1.05	71.70	78.00	7.49	8.46
4/1/04 thru 4/30/04	0.468	0.797	75.41	84.44	6.70	8.69
5/1/04 thru 5/31/04	0.684	0.896	78.84	87.91	7.03	8.64
6/1/04 thru 6/30/04	0.634	0.983	81.40	86.99	7.66	8.76
7/1/04 thru 7/31/04	0.745	0.987	81.30	85.66	7.38	8.17
8/1/04 thru 8/31/04	0.639	0.969	78.27	86.41	7.20	8.11
9/1/04 thru 9/30/04	0.63	0.97	80.45	88.37	6.87	8.97
10/1/04 thru 10/31/04	0.576	0.827	80.58	88.71	7.20	8.69
Limits	-	-	-	97	6.0	9.0

Notes:

ND = No Discharge

Bold and shaded cells exceed permit limits

Historical Data for Outfall 001 Toxicity
Water Discharge Permit LA0112836

Monitoring Period	NOEC Pass/Fail		NOEC Pass/Fail		NOEC Value (%)		NOEC Value (%)		NOEC Value (%)		NOEC Value (%)	
	Ceriodaphnia dubia	Pimephales promelas	Ceriodaphnia dubia	Pimephales promelas	Lethality, static renewal	Pimephales promelas	Lethality, static renewal	Ceriodaphnia dubia	Reprod., static renewal	Ceriodaphnia dubia	Growth, static renewal	Pimephales promelas
Monthly Avg	Daily Max	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Monthly Avg
5/1/02 to 7/31/02	Fail	Fail	Pass	Pass	0	0	100	100	0	0	100	100
5/1/02 to 7/31/02 (RT)	Fail	Fail	NA	NA	0	0	NA	NA	0	0	NA	NA
8/1/02 to 8/31/02 (RT)	Fail	Fail	NA	NA	0	0	NA	NA	0	0	NA	NA
1/1/03 to 1/31/03	Pass	Pass	Pass	Pass	100	100	100	100	42	42	100	100
2/1/03 to 4/30/03	Pass	Pass	Pass	Pass	100	100	100	100	100	100	100	100
5/1/03 to 7/31/03	Pass	Pass	Pass	Pass	100	100	100	100	32	32	100	100
8/1/03 to 10/31/03	Pass	Pass	Pass	Pass	100	100	100	100	32	32	100	100
1/1/03 to 1/31/04	Pass	Pass	Pass	Pass	100	100	100	100	32	32	100	100
2/1/04 to 4/30/04	Fail	Fail	Invalid*	Invalid*	75	75	Invalid*	Invalid*	0	0	Invalid*	Invalid*
4/1/04 to 4/30/04 (RT)	Fail	Fail	Pass	Pass	42	42	100	100	0	0	100	100
5/1/04 to 5/31/04 (RT)	Fail	Fail	NA	NA	0	0	NA	NA	0	0	NA	NA
5/1/04 to 7/31/04	Fail	Fail	Pass	Pass	0	0	100	100	0	0	100	100
8/24/04 to 8/30/04 (RT)	Fail	Fail	NA	NA	0	0	NA	NA	0	0	NA	NA
8/1/04 to 10/31/04	Fail	Fail	Pass	Pass	0	0	100	100	0	0	100	100
9/5/04 to 9/12/04 (RT)	Fail	Fail	NA	NA	0	0	NA	NA	0	0	NA	NA
10/18/04 to 10/25/04 (RT)	Fail	Fail	NA	NA	0	0	NA	NA	0	0	NA	NA

Notes:

Bold and shaded cells exceed permit limits

* - Invalid because the receiving water control failed the test

(RT) - Retest

NA - No analysis

Outfall 101

Historical a for Outfall 101
Water Discharge Permit LA0112836

Monitoring Period	Flow		Free Available Chlorine			Total Zinc			Total Chromium		
	Monthly Avg	Daily Max	Daily Avg	Monthly Max	Daily Avg	Daily Max	Daily Avg	Daily Max	Daily Avg	Daily Max	Daily Avg
	(MGD)	(lb/day)	(mg/L)	(lb/day)	(mg/L)	(lb/day)	(mg/L)	(lb/day)	(mg/L)	(lb/day)	(mg/L)
2/1/02 thru 2/28/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/1/02 thru 3/31/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/1/02 thru 4/30/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/1/02 thru 5/31/02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/1/02 thru 6/30/02	0.547	1.73	0.62	11.77	0.237	0.72	0.0564	0.0564	0.047	0.047	NA
7/1/02 thru 7/31/02	1.00453	3.46	5.362	19.8	0.282	0.69	0.43	0.43	0.036	0.036	NA
8/1/02 thru 8/31/02	0.5679	1.103219	0.5414	0.948	0.21	0.79	1.228	1.228	0.186	0.186	NA
9/1/02 thru 9/30/02	0.623	1.44	0.562	2.16	0.0581	0.99	0.142	0.142	0.059	0.059	NA
10/1/02 thru 10/31/02	0.35	1.14	1.82	3.42	0.25	0.36	0.048	0.048	0.01	0.01	NA
11/1/02 thru 11/30/02	0.098	0.47	0.51	1.44	0.19	0.28	0.071	0.071	0.064	0.064	NA
12/1/02 thru 12/31/02	0.235	1.01	0.22	0.3	0.06	0.15	0.054	0.079	0.09	0.47	NA
1/1/03 thru 1/31/03	0.316	1.24	0.098	0.229	0.039	0.1	0.381	0.381	0.166	0.166	NA
2/1/03 thru 2/28/03	0.164	0.542	0.019	0.071	0.0135	0.07	0.038	0.038	0.038	0.038	NA
3/1/03 thru 3/31/03	0.259	0.514	0.53	1.01	0.072	0.14	0.084	0.084	0.01	0.01	NA
4/1/03 thru 4/30/03	0.144	0.775	0.064	0.17	0.19	0.33	0.017	0.017	0.034	0.034	NA
5/1/03 thru 5/31/03	0.265	0.474	0.703	2.02	0.12	0.19	0.24	0.24	0.037	0.037	NA
6/1/03 thru 6/30/03	0.528	3.34	0.41	0.661	0.133	0.25	0.1	0.1	0.029	0.029	NA
7/1/03 thru 7/31/03	0.886	2.34	0.42	0.42	0.018	0.07	0.22	0.22	0.036	0.036	NA
8/1/03 thru 8/31/03	0.936	3.44	0	0	0	0	0.207	0.207	0.049	0.049	NA
9/1/03 thru 9/30/03	0.861	2.29	<0.81	<1.80	<0.1	<0.1	0.25	0.25	0.061	0.061	NA
10/1/03 thru 10/31/03	0.917	1.36	0.795	1.36	<0.100	<0.100	0.16	0.16	0.017	0.017	NA
11/1/03 thru 11/30/03	0.610	1.30	0.486	0.619	<0.100	<0.100	0.346	0.346	0.057	0.057	NA
12/1/03 thru 12/31/03	0.359	0.723	0.229	0.289	<0.080	<0.100	0.371	0.371	0.173	0.173	NA
1/1/04 thru 1/31/04	0.276	0.612	0.378	0.880	0.156	0.260	0.115	0.120	0.049	0.051	NA
2/1/04 thru 2/29/04	0.333	0.729	0.406	0.657	0.133	0.260	0.094	0.094	0.037	0.037	NA
3/1/04 thru 3/31/04	0.402	0.903	0.269	0.405	<0.100	<0.100	0.506	0.506	0.122	0.122	NA
4/1/04 thru 4/30/04	0.308	0.647	0.232	0.350	<0.100	<0.100	0.223	0.223	0.093	0.093	NA
5/1/04 thru 5/31/04	0.534	0.746	0.381	0.481	<0.100	<0.100	0.139	0.139	0.040	0.040	NA
6/1/04 thru 6/30/04	0.420	0.783	0.521	0.804	<0.122	0.260	0.189	0.189	0.029	0.029	NA
7/1/04 thru 7/31/04	0.495	0.737	0.889	1.270	0.230	0.380	0.077	0.077	0.025	0.025	NA
8/1/04 thru 8/31/04	0.389	0.719	<0.327	<0.599	<0.110	<0.160	0.053	0.053	0.021	0.021	NA
9/1/04 thru 9/30/04	0.374	0.721	0.382	0.653	<0.123	0.180	0.000	0.000	0.000	0.000	NA
10/1/04 thru 10/31/04	0.308	0.577	0.473	0.682	0.189	0.270	0.156	0.231	0.099	0.1566	NA
11/1/04 thru 11/30/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/1/04 thru 12/31/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/1/05 thru 1/31/05	NA	NA	NA	NA	NA	NA	NA	NA	<0.015	<0.015	NA
Permit Limits	-	-	1.9	4.8	0.2	0.5	9.7	9.7	1.0	1.9	0.2

Note:

ND = No Discharge

Bold and shaded cells exceed permit limits

WATER AND EFFLUENT CHARACTERISTICS
(Continued From Page 3 of Form 2C)Part A
OUTFALL NUMBER 101

1 POLLUTANT	2. EFFLUENT		3. UNITS		4. INTAKE (OPTIONAL)	
	a. MAXIMUM DAILY VALUE (1) CONC. (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONC. (2) MASS	c. LONG TERM AVERAGE (1) CONC. (2) MASS	d. NO. OF ANALYSES	e. LONG TERM AVERAGE VALUE (1) CONC. (2) MASS	f. NO. OF ANALYSES
x. Biochemical Oxygen Demand (BOD)	6 41	14.41 73.86	NA NA	1 1	mgL mgL	NA NA
y. Chemical Oxygen Demand (COD)	19.8	35.67	NA NA	1 1	mgL mgL	NA NA
c. Total Organic Carbon (TOC)	5	9.01	NA NA	1 1	mgL mgL	NA NA
d. Total Suspended Solids (TSS)	0.717	1.29	NA NA	1 1	mgL mgL	NA NA
e. Ammonia (as NH ₃)	0.216	0.216	NA NA	1 1	mgL MGO	NA NA
f. Flow	58	58	NA NA	1 1	°F °F	NA NA
g. Temperature (Summer)	58	58	NA NA	1 1	°F °F	NA NA
h. Temperature (Winter)	58	58	NA NA	1 1	°F °F	NA NA
i. pH	8.36	8.36	NA NA	1 1	mgL mgL	NA NA

3. POLLUTANT AND CAS NO.	2b. BELIEVED PRESENT		3. EFFLUENT		4. UNITS	
	a. MAXIMUM DAILY VALUE (1) CONC. (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONC. (2) MASS	c. LONG TERM AVERAGE (1) CONC. (2) MASS	d. NO. OF ANALYSES	e. LONG TERM AVERAGE VALUE (1) CONC. (2) MASS	f. NO. OF ANALYSES
a. Bromide (28959-67-9)	x	0.01	0.02	1	mgL mgL	NA NA
b. Chlorine, Total Residual	x		NA	1	mgL mgL	NA NA
c. Color (True Apparent)	x		NA	1	mgL mgL	NA NA
d. Fecal Coliform	x		NA	1	mgL mgL	NA NA
e. Fluoride (10964-48-5)	x		NA	1	mgL mgL	NA NA
f. Manganese (as Mn)	x	1.38	2.48	NA	mgL mgL	NA NA
g. Nitrogen, Total Organic (as N)	x	2.22	4.00	NA	mgL mgL	NA NA
h. Oil & Grease	x	45.0	9.01	NA	mgL mgL	NA NA
i. Phosphorus (as P), Total (7723-14-9)	x	1.55	2.78	NA	mgL mgL	NA NA
j. Radioactivity Alpha, Total	x		NA	1	mgL mgL	NA NA
k. Radioactivity Beta, Total	x		NA	1	mgL mgL	NA NA
l. Radon	x		NA	1	mgL mgL	NA NA
m. Radon activity Radium Total	x		NA	1	mgL mgL	NA NA
n. Radon activity Radium 226, Total	x		NA	1	mgL mgL	NA NA
o. Sulfate (as SO ₄), Total (50-108-79-9)	x	995	1792.43	NA	mgL mgL	NA NA
p. Sulfide (as S)	x	<0.2	0.36	NA	mgL mgL	NA NA
q. Sulfit (as SO ₃), Total (1205-45-3)	x	<1.0	1.80	NA	mgL mgL	NA NA
r. Surfaceants	x	0.05	0.19	NA	mgL mgL	NA NA
s. Arsenium, Total (7429-10-5)	x	0.086	0.12	NA	mgL mgL	NA NA
t. Barium, Total (7440-13-3)	x	0.766	1.38	NA	mgL mgL	NA NA
u. Boron, Total (7440-12-0)	x		NA	1	mgL mgL	NA NA
v. Cobalt, Total (7440-46-4)	x		NA	1	mgL mgL	NA NA
w. Iron, Total (7439-99-6)	x	0.579	1.04	NA	mgL mgL	NA NA
x. Magnesium, Total (7439-95-1)	x	94.8	170.42	NA	mgL mgL	NA NA
y. Molybdenum, Total (7439-96-7)	x		NA	1	mgL mgL	NA NA
z. Manganese, Total (7439-96-5)	x	0.511	0.92	NA	mgL mgL	NA NA
aa. Tin, Total (7440-31-5)	x	<0.1	0.18	NA	mgL mgL	NA NA
ab. Titanium, Total (7440-32-6)	x		NA	1	mgL mgL	NA NA

DRAFT NUMBER: 101									
5. INTAKE (OPTIONAL)									
6. LONG TERM AVERAGE VALUE									
4. UNITS					a.	b.	d. CONC. (2) MASS ANALYSES		
1. POLLUTANT AND CAS NUMBER	2a. TESTING REQUIRED	2b. BELIEVED PRESENT	2c. BELIEVED ABSENT	3. EFFLUENT	a. MAXIMUM DAILY VALUE (1) CONC. (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONC. (2) MASS	c. LONG TERM AVERAGE (1) CONC. (2) MASS	d. CONC.	(2) MASS ANALYSES
Pmt. C-Nitrus Compounds and Total Phenols	x	x	x	<0.05	0.0001	NA	NA	1	mg/L
1M. Anthracene, Total (7440-36-9)	x	x	x	<0.01	0.0100	NA	NA	1	mg/L
2M. Asben, Total (1410-38-2)	x	x	x	<0.05	0.0050	NA	NA	1	mg/L
3M. Benzothiophene, Total (74-10-17)	x	x	x	<0.001	0.000100	NA	NA	1	mg/L
4M. Cadmium, Total (74-40-13-9)	x	x	x	<0.01	0.000100	NA	NA	1	mg/L
5M. Chloroethane, Total (74-40-47-2)	x	x	x	<0.01	0.000100	NA	NA	1	mg/L
6M. Copper, Total (74-40-50-9)	x	x	x	<0.006	0.000000	NA	NA	1	mg/L
7M. Lead, Total (74-39-02-1)	x	x	x	<0.0002	0.000020	NA	NA	1	mg/L
8M. Mercury, Total (74-39-97-6)	x	x	x	<0.01	0.00100	NA	NA	1	mg/L
9M. Nickel, Total (74-00-0)	x	x	x	<0.005	0.000000	NA	NA	1	mg/L
10M. Selenium, Total (77-42-49-2)	x	x	x	<0.002	0.000020	NA	NA	1	mg/L
11M. Silver, Total (74-40-22-4)	x	x	x	0.011	0.000000	NA	NA	1	mg/L
12M. Thallium, Total (74-40-28-0)	x	x	x	0.0247	0.000445	NA	NA	1	mg/L
13M. Zinc, Total (7440-56-0)	x	x	x	0.02	0.000000	NA	NA	1	mg/L
14M. Crustace, Total (51-12-5)	x	x	x	0.0247	0.000445	NA	NA	1	mg/L
15M. Phenol, Total	x	x	x	0.02	0.000000	NA	NA	1	mg/L
Dibutyl									mg/L
4.3.7.6. Techlofodenzol P-Olohol (1176-01-6)									
Part C-Nitrus Compounds									
IV. Acetoin (107-02-0)	x	x	x	<50	0.00001	NA	NA	1	mg/L
2V. Acetonitrile (107-13-1)	x	x	x	<5	0.00000	NA	NA	1	mg/L
4V. Benzen (7-13-2)	x	x	x	<5	0.00000	NA	NA	1	mg/L
4V. Bis (Chloroanethyl) Ether (54-89-1)	x	x	x	<5	0.00000	NA	NA	1	mg/L
5V. Bromofrom (75-25-2)	x	x	x	<5	0.00000	NA	NA	1	mg/L
6V. Carb Tetrachloride (56-23-5)	x	x	x	<5	0.00000	NA	NA	1	mg/L
7V. Chlorobenzene (108-90-7)	x	x	x	<5	0.00000	NA	NA	1	mg/L
6V. Chorofromunthane (124-58-1)	x	x	x	<5	0.00000	NA	NA	1	mg/L
9V. Chinualline (75-00-3)	x	x	x	<10	0.0160	NA	NA	1	mg/L
10V. 2-Chloroethyl Vinyl Ether (110-15-8)	x	x	x	<10	0.0160	NA	NA	1	mg/L
11V. Chloroform (67-66-3)	x	x	x	<5	0.00000	NA	NA	1	mg/L
12V. Dichlorobiunmethane (75-27-4)	x	x	x	<5	0.00000	NA	NA	1	mg/L
13V. Dichlorodifluoromethane (67-71-6)	x	x	x	<5	0.00000	NA	NA	1	mg/L
14V. 1, 1-Dichloroethane (75-54-3)	x	x	x	<5	0.00000	NA	NA	1	mg/L
15V. 1, 2-Dichloroethane (107-06-2)	x	x	x	<5	0.00000	NA	NA	1	mg/L
16V. 1, 1-Dichloroethylene (75-35-4)	x	x	x	<5	0.00000	NA	NA	1	mg/L
17V. 1, 2-Dichloropropene (76-07-5)	x	x	x	<5	0.00000	NA	NA	1	mg/L
18V. 1, 2-Dichloropropane (54-75-6)	x	x	x	<5	0.00000	NA	NA	1	mg/L
19V. Ethylbenzene (100-11-4)	x	x	x	<5	0.00000	NA	NA	1	mg/L
20V. Methyl bromide (74-85-9)	x	x	x	<0.010	0.000100	NA	NA	1	mg/L
21V. Methyl Chloride (74-87-3)	x	x	x	<1.5	0.00027	NA	NA	1	mg/L
22V. Methylene Chloride (75-09-2)	x	x	x	<5	0.00000	NA	NA	1	mg/L

EPA I.D. NUMBER: LA0112836										OUTFALL NUMBER: 101	
1. POLLUTANT AND CAS NUMBER	2a. TESTING REQUIRED	2b. BELIEVED PRESENT	2c. BELIEVED ABSENT	3. EFFLUENT				4. UNITS		5. TAKE (OPTIONAL)	
				a. MAXIMUM DAILY VALUE (1) CONC.	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVERAGE (1) CONC.	d. NO. OF ANALYSES (2) MASS	e. CONC.	f. MASS		
23V. 1,1,2,2-Tetrachloroethane (19-14-5)	x	x	x	<0.5	0.0009	NA	NA	NA	NA	1	19A. Birthday
24V. Tetrachloroethylene (127-16-4)	x	x	x	<5	0.0590	NA	NA	NA	NA	1	19B. Birthday
25V. Toluene (108-86-3)	x	x	x	<5	0.0590	NA	NA	NA	NA	1	19C. Birthday
26V. 1,2-Trans-Chloroethylene (158-80-5)	x	x	x	<5	0.0590	NA	NA	NA	NA	1	19D. Birthday
27V. 1,1,1-Trichloroethane (11-55-6)	x	x	x	<5	0.0590	NA	NA	NA	NA	1	19E. Birthday
28V. 1,1,2-Trichloroethane (79-00-5)	x	x	x	<5	0.0590	NA	NA	NA	NA	1	19F. Birthday
29V. Trichloroethylene (79-01-6)	x	x	x	<5	0.0590	NA	NA	NA	NA	1	19G. Birthday
30V. Trichlorofluoromethane (15-68-2)	x	x	x	<2	0.0236	NA	NA	NA	NA	1	19H. Birthday
31V. Vinyl Chloride (73-01-4)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19I. Birthday
1a. 2-Chloropropano (95-57-8)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19J. Birthday
2a. 2,4-Dichlorophenoxy (120-63-2)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19K. Birthday
3a. 2-(Chloromethyl)propano (105-87-9)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
4a. 4-Chloro- <i>n</i> -Cresol (534-52-1)	x	x	x	<50	0.0591	NA	NA	NA	NA	1	19M. Birthday
5a. 2-Chloropropanal (51-28-5)	x	x	x	<50	0.0591	NA	NA	NA	NA	1	19N. Birthday
6a. 2-Chlorophenoxy (68-75-5)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19P. Birthday
7a. 4-IUPAC Phenol (100-02-7)	x	x	x	<50	0.0591	NA	NA	NA	NA	1	19Q. Birthday
8a. 2-Chloro- <i>n</i> -Cresol (59-56-7)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19R. Birthday
9a. Pentachloro-p-xylene (67-66-5)	x	x	x	<10	0.0721	NA	NA	NA	NA	1	19S. Birthday
10a. Phenol (100-95-2)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19T. Birthday
11a. 2,4,6-Trichlorobenzo (98-06-2)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19U. Birthday
Part C - Basic/Neutral Compounds											
1B. Acenaphthene (83-32-9)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
2B. Acenaphthylene (208-96-9)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
3B. Anthracene (120-12-7)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
4B. Bantol (97-87-5)	x	x	x	<50	0.0591	NA	NA	NA	NA	1	19L. Birthday
5B. Benz[a]Anthracene (56-55-1)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
6B. Benz[a]Perylene (50-32-8)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
7B. 3,4-Benzofluoranthene (205-99-2)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
8B. Benz[b]Perylene (191-24-2)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
9B. Benz[k]Fluoranthene (207-08-9)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
10B. Bis[2-Chlorotetraoxy]Methane (11-91-1)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
11B. Bis[2-Chloroethyl] Ether (11-14-4)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
12B. Bis[2-ChlorotetraOxy] Ether (102-60-1)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
13B. Bis[2-Ethoxyethyl] Phthalate (117-81-7)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
14B. 4-Bromophenyl Phenyl Ether (110-55-3)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
15B. Butyl Benzyl Phthalate (85-61-7)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
16B. 2-Chlorophenylbenzene (91-50-7)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
17B. 4-Chlorophenyl Phenyl Ether (7005-72-9)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
18B. Chrysene (18-01-9)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday
19B. Gibberel (84-11-0) Admixture (53-70-3)	x	x	x	<10	0.0180	NA	NA	NA	NA	1	19L. Birthday

1. POLLUTANT AND CAS NUMBER	2a. TESTING REQUIRED		2b. BELIEVED PRESENT		2c. BELIEVED ABSENT		3. EFFLUENT		4. UNITS		5. INTAKE (OPTIONAL)	
	b. MAXIMUM DAILY VALUE (1) CONC., (2) MASS.	c. LONG TERM AVERAGE (1) CONC., (2) MASS.	b. MAXIMUM 30 DAY VALUE (1) CONC., (2) MASS.	c. LONG TERM AVERAGE (1) CONC., (2) MASS.	d. NO OF ANALYSES	e. NO OF ANALYSES	f. NO OF ANALYSES	g. NO OF ANALYSES	h. NO OF ANALYSES	i. NO OF ANALYSES	j. NO OF ANALYSES	k. NO OF ANALYSES
1.1. 1,2-Dichloroethylene (95-50-1)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.2. 1,3-Dichloroethylene (54-17-1)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.3. 1,4-Dichlorobenzene (106-46-7)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.4. 1,2,3-Trichlorobenzene (91-59-1)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.5. Diethyl Phthalate (84-66-2)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.6. Dimethyl Phthalate (131-11-3)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.7. Di-n-Butyl Phthalate (84-74-2)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.8. 2,4-Dimethylbenzene (112-14-2)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.9. 2,5-Dimethylbenzene (606-20-2)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.10. Di-n-Octyl Phthalate (117-64-0)	x	x	<20	0.0360	NA	NA	NA	NA	1	190L	190L	NA
1.11. 1,2-Diphenylbenzene (122-56-7)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.12. Ethylbenzene (105-44-0)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.13. Fluorene (86-73-7)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.14. Hexachlorobutene (16-71-1)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.15. Isopropylbenzene (82-68-3)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.16. Hexachlorocyclopentadiene (77-47-1)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.17. Heptabromodiphenyl (67-72-1)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.18. Indene (1,2,3-5-6) Pentene (193-39-5)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.19. Isophorone (16-58-1)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.20. Isopropylbenzene (91-10-5)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.21. N-Nitrobenzaldehyde (82-75-9)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.22. N-Nitrosodimethylamine (221-56-7)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.23. N-Nitrosodiphenylamine (86-30-6)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.24. Phenanthrene (85-01-8)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.25. Pyrene (125-07-0)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
1.26. 1,2,4-Trichlorobenzene (120-87-1)	x	x	<10	0.0180	NA	NA	NA	NA	1	190L	190L	NA
Total C. Pesticides												
1P. Acetanilide (309-06-2)												
2P. Alpha-BTC (319-04-6)												
3P. Beta-BTC (319-25-7)												
4P. Gamma-BTC (58-89-9)												
5P. delta BTC (319-05-9)												
6P. Chlordane (51-74-3)												
7P. 4-A-OOD (58-29-3)												
8P. 4-A-DDE (72-55-9)												
9P. 4-A-DDD (72-54-8)												
10P. Dieudon (60-57-1)												
11P. alpha-Endosulfan (115-29-7)												
12P. beta-Endosulfan (115-28-7)												
13P. Endosulfan Sulfate (1031-07-8)												

1. POLLUTANT AND CAS NUMBER	2a. TESTING REQUIRED	2b BELOVED PRESENT	2c BELOVED ABSENT	3. EFFLUENT			4. UNITS			5. HIKE (OPTIONAL)		
				a. MAXIMUM DAILY VALUE (1) CONC.	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVERAGE (1) CONC.	d. NO OF ANALYSES	e. LONG TERM AVERAGE VALUE (1) CONC.	f. NO OF ANALYSES	g. HIKE (OPTIONAL)		
1,1-P. Ethanol (72-20-9)		x										
1,5-P. Ethanol Aldehyde (7-121-93-4)		x										
1,6-P. Heptanethiol (76-44-8)		x										
1,7-P. Hexanethiol (1024-57-3)		x										
1,8-P. Octanethiol (524169-2-19)		x										
1,9-P. PCB 1242 (51097-69-1)		x										
1,9-P. PCB 1254 (11097-69-1)		x										
2,1-P. PCB 1221 (11114-28-2)		x										
2,2-P. PCB 1232 (11114-16-5)		x										
2,2-P. PCB 1246 (12512-29-6)		x										
2,3-P. PCB 1260 (111936-82-5)		x										
2,4-P. PCB 1016 (12614-1-2)		x										
2,5-P. Toluene (9901-35-2)		x										
<i>Other Parameters</i>												
Chloroform VI	x	x	<10	0.0180	NA	NA	NA	NA	1	mg/L	16 day	
Total Kjeldahl Nitrogen (TKN)	x	x	2.41	0.3415	NA	NA	NA	NA	1	mg/L	16 day	
Dichlorophenol	x	x	<10	0.0180	NA	NA	NA	NA	1	mg/L	16 day	
4-chlorophenol	x	x	<10	0.0180	NA	NA	NA	NA	1	mg/L	16 day	
2,3-dichlorophenol	x	x	<10	0.0180	NA	NA	NA	NA	1	mg/L	16 day	
2,5-dichlorophenol	x	x	<10	0.0180	NA	NA	NA	NA	1	mg/L	16 day	
2,6-dichlorophenol	x	x	<10	0.0180	NA	NA	NA	NA	1	mg/L	16 day	
1,4-dichlorophenol	x	x	<10	0.0100	NA	NA	NA	NA	1	mg/L	16 day	
2,4-Dichlorophenoxyacetic acid (2,4-D)	x	x	x	NA	NA	NA	NA	NA	1	mg/L	16 day	
2,2,4,5-Tetrachlorophenoxy) phosphonic acid (2,4,5-TP)		x		NA	NA	NA	NA	NA	1	mg/L	16 day	

NOTES:

A 21-day continuous sampling event was conducted during the period _____ for all parameters indicated above, with the exception of temperature, pH, fecal coliform, oil and grease, total phenols, and total residual chlorine which were collected by grab sample, as well as data collected from the _____ sampling event, were used for those parameters with multiple laboratory analyses indicated above. A flow rate of _____ MGD was used to convert the _____ sampling event data (concentration to mass where applicable).

All analytical results reported with a 'less than' sign (<) were either (1) non-detected and quantifiable at the practical quantitation limit (PQL) achieved by the applicable laboratory analytical method, or (2) non-detected and quantifiable at the practical quantitation limit (PQL) achieved by the applicable laboratory analytical method.

NA = Testing not required; not applicable.

mg/L = milligrams per liter

lbs/day = pounds per day

MGD = million gallons per day

°F = degrees Fahrenheit

S.U. = Standard units

cal/100 ml. = calories per 100 milliliters

Outfall 201

Historical Data for Outfall 201
Water Discharge Permit LA0112836

Monitoring Period	Flow		Total Suspended Solids		Oil & Grease	
	Monthly Avg	Daily Max	Monthly Avg	Daily Max	Monthly Avg	Daily Max
	(MGD)		(mg/L)		(mg/L)	
1/1/02 thru 1/31/02	ND	ND	ND	ND	ND	ND
2/1/02 thru 2/28/02	ND	ND	ND	ND	ND	ND
3/1/02 thru 3/31/02	0.149	0.375	112	254	<5	<5
4/1/02 thru 4/30/02	0.3221	0.500	99.5	280	<5	<5
5/1/02 thru 5/31/02	0.1425	0.350	48.6	166	<5	<5
6/1/02 thru 6/30/02	0.2122	0.650	5	5	5	5
7/1/02 thru 7/31/02	0.0974	0.150	8	14	<5	<5
8/1/02 thru 8/31/02	0.0565	0.145	6	8	<5	<5
9/1/02 thru 9/30/02	0.06	0.190	6.25	10	<5	<5
10/1/02 thru 10/31/02	0.065	0.163	16.4	40	<5	<5
11/1/02 thru 11/30/02	0.0374	0.080	26.75	82	<5	<5
12/1/02 thru 12/31/02	0.0497	0.080	5.8	8	<5	<5
1/1/03 thru 1/31/03	0.077	0.320	26.75	46	<5	<5
2/1/03 thru 2/28/03	0.131	0.257	<5	<5	<5	<5
3/1/03 thru 3/31/03	0.092	0.150	5.8	8	<5	<5
4/1/03 thru 4/30/03	0.014	0.075	9.25	12	<5	<5
5/1/03 thru 5/31/03	0.099	0.150	7.25	12	<5	<5
6/1/03 thru 6/30/03	0.123	0.249	10.6	20	<5	<5
7/1/03 thru 7/31/03	0.113	0.225	10	21	<5	<5
8/1/03 thru 8/31/03	0.114	0.300	12.5	18	<5	<5
9/1/03 thru 9/30/03	0.085	0.150	<7.8	15	<5	<5
10/1/03 thru 10/31/03	0.089	0.150	<8.5	19	<5.0	<5.0
11/1/03 thru 11/30/03	0.075	0.075	21	41	<5.0	<5.0
12/1/03 thru 12/31/03	0.075	0.075	18.5	31	<5.0	<5.0
1/1/04 thru 1/31/04	0.075	0.075	28	60	<5.0	<5.0
2/1/04 thru 2/29/04	0.085	0.150	<9.0	12	<5.0	<5.0
3/1/04 thru 3/31/04	0.150	0.150	7.75	11	<5.0	<5.0
4/1/04 thru 4/30/04	0.150	0.150	22	31	<5.0	<5.0
5/1/04 thru 5/31/04	0.150	0.150	<7.40	17	<5.0	<5.0
6/1/04 thru 6/30/04	0.200	0.200	11.25	26.0	<5.0	<5.0
7/1/04 thru 7/31/04	0.250	0.250	<5.25	6.0	<5.0	<5.0
8/1/04 thru 8/31/04	0.250	0.250	<5.8	9.0	<5.0	<5.0
9/1/04 thru 9/30/04	0.250	0.250	<12.75	36.0	<5.0	<5.0
10/1/04 thru 10/31/04	0.250	0.250	<9.5	23.0	<5.25	6.0
Permit Limits	-	-	30	100	15	20

Notes:

ND = No Discharge

Bold and shaded cells exceed permit limits

V. INAKE AND EFFLUENT CHARACTERISTICS
P-21A

(Continued from Page 3 of Form 2C)

CUT/ALL NUMBER 201											
1. POLLUTANT		2. EFFLUENT				3. UNITS				4. INTAKE (OPTIONAL)	
		a. MAXIMUM DAILY VALUE (1) CONC. (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONC. (2) MASS	c. LONG TERM AVERAGE (1) CONC. (2) MASS	d. NO. OF ANALYSES	e. CONC. MASS	f. CONC. MASS	g. LONG TERM AVERAGE VALUE (1) CONC. (2) MASS	h. NO. OF ANALYSES		
1. Biochemical Oxygen Demand (BOD)		6	14.41	NA	NA	1	mg/L	mg/L	1A		
2. Chemical Oxygen Demand (COD)		≤15	36.03	NA	NA	1	mg/L	mg/L	1A		
3. Total Organic Carbon (TOC)		6.7	16.09	NA	NA	1	mg/L	mg/L	1A		
4. Total Suspended Solids (TSS)		35	84.07	NA	NA	1	mg/L	mg/L	1A		
5. Ammonia (asN)		<0.5	1.20	NA	NA	1	mg/L	mg/L	1A		
6. BOD			0.248	VALUE	VALUE	1	MAD		1A		
7. Temperature (Summer)		50	50	VALUE	VALUE	1	*F	*F	1A		
8. Temperature (Winter)		MINIMUM	MAXIMUM	VALUE	VALUE	1			1A		
P-21B		8.36	0.36			1			1A		
3. POLLUTANT AND GAS (NO.)		2. EFFLUENT				3. EFFLUENT				4. UNITS	
		a. MAXIMUM DAILY VALUE (1) CONC. (2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONC. (2) MASS	c. LONG TERM AVERAGE (1) CONC. (2) MASS	d. NO. OF ANALYSES	e. CONC. MASS	f. CONC. MASS	g. LONG TERM AVERAGE VALUE (1) CONC. (2) MASS	h. NO. OF ANALYSES		
1. Bromide (2499-67-9)	x	<0.05	0.12	NA	NA	1	mg/L	mg/L	1A		
2. Chlorine, True (Neutral)	x			NA	NA	1	mg/L	mg/L	1A		
3. Color, True, Apparent	x			NA	NA	1	mg/L	mg/L	1A		
4. Formalin	x			NA	NA	1	mg/L	mg/L	1A		
5. Fluoride (16904-18-1)	x	0.45	1.08	NA	NA	1	mg/L	mg/L	1A		
6. Nitrate-nitrite (as N)	x	0.36	1.41	NA	NA	1	mg/L	mg/L	1A		
7. Nitrogen, Total Organic (as N)	x	<0.0	12.01	NA	NA	1	mg/L	mg/L	1A		
8. Oil & Grease	x	3.76	9.03	NA	NA	1	mg/L	mg/L	1A		
9. Phosphorus (as P) Total (7723-14-0)	x			NA	NA	1	mg/L	mg/L	1A		
10. Radioactive Alpha Total	x			NA	NA	1	mg/L	mg/L	1A		
11. Radioactivity Beta, Total	x			NA	NA	1	mg/L	mg/L	1A		
12. Radioactivity, Radon, Total	x			NA	NA	1	mg/L	mg/L	1A		
13. Radioactive, Radon, 226 Total	x			NA	NA	1	mg/L	mg/L	1A		
14. Sulfate (as SO ₄) (14808-79-4)	x	4.4	10.57	NA	NA	1	mg/L	mg/L	1A		
15. Sulfide (as S)	x	<0.2	0.48	NA	NA	1	mg/L	mg/L	1A		
16. Sulfite (as SO ₃) (14265-45-2)	x	<1.0	2.40	NA	NA	1	mg/L	mg/L	1A		
17. Sulphuric Acid, Total	x	<0.1	0.24	NA	NA	1	mg/L	mg/L	1A		
18. Sulutants				NA	NA	1	mg/L	mg/L	1A		
19. Tannins, Total (7729-90-5)	x	0.918	2.20	NA	NA	1	mg/L	mg/L	1A		
20. Barium, Total (7440-33-2)	x	0.994	2.15	NA	NA	1	mg/L	mg/L	1A		
21. Boron, Total (7440-12-0)	x			NA	NA	1	mg/L	mg/L	1A		
22. Cobalt, Total (7440-08-4)	x			NA	NA	1	mg/L	mg/L	1A		
23. Iron, Total (7439-99-6)	x	20.6	49.46	NA	NA	1	mg/L	mg/L	1A		
24. Manganese, Total (7439-95-4)	x	15.2	36.51	NA	NA	1	mg/L	mg/L	1A		
25. Molybdenum, Total (7439-96-7)	x			NA	NA	1	mg/L	mg/L	1A		
26. Manganese, Total (7439-96-5)	x	0.824	1.50	NA	NA	1	mg/L	mg/L	1A		
27. Tin, Total (7440-21-5)	x	<0.1	0.24	NA	NA	1	mg/L	mg/L	1A		
28. Thallium, Total (7440-26-6)	x			NA	NA	1	mg/L	mg/L	1A		

1. POLLUTANT AND CAS NUMBER		2a. TESTING REQUIRED		2b. BELIEVED PRESENT		2c. BELIEVED ABSENT		3. EFFLUENT		4. UNITS		5. INFLATE (OF TIDAL)	
								(1) CONC.	(2) MASS	(1) CONC.	(2) MASS	(1) CONC.	(2) MASS
Part C-Metals, Cyanide, and Total Phenols													
1N. Arsenic, Total (7440-26-0)		A				<0.05	0.1201	NA	NA	NA	NA	1	mg/L
2N. Arsenic, Total (7440-30-2)		X				<0.01	0.0240	NA	NA	NA	NA	1	mg/L
3N. Barium, Total (7440-14-7)		X				<0.005	0.0120	NA	NA	NA	NA	1	mg/L
4N. Cadmium, Total (7440-43-9)		X				<0.001	0.0024	NA	NA	NA	NA	1	mg/L
5N. Chromium, Total (7440-47-3)		X					NA	NA	NA	NA	NA	1	mg/L
6N. Copper, Total (7440-56-8)		X				<0.01	0.0240	NA	NA	NA	NA	1	mg/L
7N. Lead, Total (7439-92-1)		X				<0.005	0.0120	NA	NA	NA	NA	1	mg/L
8N. Mercury, Total (7439-76-6)		X				<0.0002	0.00048	NA	NA	NA	NA	1	mg/L
9N. Nickel, Total (7440-02-0)		X				<0.01	0.0240	NA	NA	NA	NA	1	mg/L
10N. Selenium, Total (7742-49-2)		X				<0.005	0.0120	NA	NA	NA	NA	1	mg/L
11N. Silver, Total (7440-32-4)		X				<0.002	0.0048	NA	NA	NA	NA	1	mg/L
12N. Thallium, Total (7440-29-0)		X				0.017	0.0254	NA	NA	NA	NA	1	mg/L
13N. Zinc, Total (7440-66-6)		X				<0.02	0.0180	NA	NA	NA	NA	1	mg/L
14N. Cyanide, Total (57-12-5)		X				<0.01	0.0240	NA	NA	NA	NA	1	mg/L
15N. Phenol, Total		X											mg/L
Dieldrin													
2.9.7-Bis(4-chlorophenoxy) P-Dioxin (1764-01-6)													mg/L
Part D-Carbofuran Compounds													
IV. Acaricide (107-02-6)		X				<50	0.1201	NA	NA	NA	NA	1	mg/L
IV. Acaroflute (107-13-1)		X				<50	0.1201	NA	NA	NA	NA	1	mg/L
IV. Benzene (118-01-2)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. Bis (Chloromethyl) Ether (542-86-1)		X					NA	NA	NA	NA	NA	1	mg/L
IV. Biundiol (75-25-2)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. Carbophenoxide (56-23-5)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. Chlordiphenone (108-90-7)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. Chlorobutanonethane (124-18-1)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. Chlordanone (15-00-1)		X				<10	0.0240	NA	NA	NA	NA	1	mg/L
IV. 2-Chloroethoxy Ethox (110-75-0)		X				<10	0.0240	NA	NA	NA	NA	1	mg/L
IV. Chlordan		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. Chlorketononethane (75-27-4)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. Dichloropropionethane (75-77-5)		X					NA	NA	NA	NA	NA	1	mg/L
IV. 1,1-Dichloroethane (75-34-3)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. 1,2-Dichloroethane (107-06-2)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. 1,1-Dichloroethene (75-35-4)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. 1,2-Dichloropropene (76-81-5)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. 1,3-Dichloropropylene (54-12-75-6)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. Ethylbenzene (108-41-4)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L
IV. Methyl Bromide (74-83-9)		X				<0.870	0.0021	NA	NA	NA	NA	1	mg/L
IV. Vinyl Chloride (74-81-3)		X				<1.5	0.0180	NA	NA	NA	NA	1	mg/L
IV. Methylene Chloride (75-09-2)		X				<5	0.0120	NA	NA	NA	NA	1	mg/L

EPA ID NUMBER : A011285

1. POLLUTANT AND CAS NUMBER	2a TESTING REQUIRED	2b BELIEVED PRESENT	2c BELIEVED ABSENT	3. EFFLUENT			4. UNITS			5. INTAKE (DAILY/HALF)		
				a. MAXIMUM DAILY VALUE (1) CONC.	(2) MASS	b. NO OF ANALYSES	c. LONG TERM AVERAGE (1) CONC.	(2) MASS	b. NO OF ANALYSES	c. LONG TERM AVERAGE VALUE (1) MASS	(2) MASS	b. NO OF ANALYSES
24V. 1,1,2,2-Tetrachloroethane (79-34-5)	x	x		<0.5	0.0012	1A	NA	NA	1A	1	1	1A
24V. Tetrachloroethylene (127-18-1)	x	x		<5	0.0120	NA	NA	NA	1A	1	1	1A
25V. Toluene (108-88-3)	x	x		<5	0.0120	NA	NA	NA	1A	1	1	1A
26V. 1,2-Tetra-Chloroethylene (156-60-5)	x	x		<5	0.0120	NA	NA	NA	1A	1	1	1A
27V. 1,1,1,1-Tetrachloroethane (71-55-0)	x	x		<5	0.0120	NA	NA	NA	1A	1	1	1A
28V. 1,1,2-Trichloroethane (70-00-5)	x	x		<5	0.0120	NA	NA	NA	1A	1	1	1A
29V. Trichloroethylene (79-01-6)	x	x		<5	0.0120	NA	NA	NA	1A	1	1	1A
30V. Trichloroethane (75-09-1)	x	x		<2	0.0048	NA	NA	NA	1A	1	1	1A
31V. Vinyl Chloride (75-01-4)	x	x		<2	0.0048	NA	NA	NA	1A	1	1	1A
1A. 2-Chloropropanol (65-57-8)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
2A. 2,4-Dichloropropenol (1120-83-2)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
3A. 2,4-Dimethylphenol (1105-67-9)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
4A. 4,6-Dinitro- α -Cresol (534-32-1)	x	x		<50	0.1201	NA	NA	NA	1A	1	1	1A
5A. 2,4-Dinitrophenol (51-20-9)	x	x		<50	0.1201	NA	NA	NA	1A	1	1	1A
6A. 2,4-Dinitrophenol (98-75-5)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
7A. 4-Nitrophenol (100-02-7)	x	x		<50	0.1201	NA	NA	NA	1A	1	1	1A
8A. 2-Chloro-4-Cresol (59-50-7)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
9A. Pentachlorophenol (97-06-5)	x	x		<10	0.0961	NA	NA	NA	1A	1	1	1A
10A. Phenol (108-95-2)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
11A. 2,4,6-Tri-Chlorophenol (81-06-2)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
Part C. Basereluteal Compounds												
1B. Acetonephthalimide (13-35-9)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
2B. Acenaphthylene (208-96-8)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
3B. Anthracene (112-12-7)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
4B. Biacridine (92-81-9)	x	x		<50	0.1201	NA	NA	NA	1A	1	1	1A
5B. Bentzo(a)Acridine (55-25-3)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
6B. Bentzo(a)Pyrene (50-32-0)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
7B. 3a-Benzo[b]fluoranthene (205-99-2)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
8B. Bentzo(g,h,i)Perylene (191-24-2)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
9B. Bentzo(k)Fluoranthene (207-00-5)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
10B. Bis(2-Chloroethyl) Methane (11-91-1)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
11B. Bis(2-Chloroethyl) Ether (111-14-1)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
12B. Bis(2-Chloroethyl) Ether (102-50-1)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
13B. Bis(2-Ethylhexyl) Phthalate (117-81-7)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
14B. 4-Bromobiphenyl Pheny! Ether (111-55-3)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
15B. Butyl Benzyl Phthalate (85-68-7)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
16B. 2-Chloro-4-phenoxybenzene (91-60-7)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
17B. 4-Chlorobiphenyl Phenyl Ether (7005-72-3)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
18B. Chrysene (210-01-9)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A
19B. Dibenz(a,h)Anthracene (53-70-3)	x	x		<10	0.0240	NA	NA	NA	1A	1	1	1A

CONTINUED

OUTFALL NUMBER: LA012036												
1. POLLUTANT AND CAS NUMBER	2a. TESTING REQUIRED		2b. BELIEVED PRESENT		2c. BELIEVED ABSENT		3. EFFLUENT		4. UNITS		5. INLAKE (OR LIQUID) ANALYSIS	
	a. MAXIMUM DAILY VALUE	b. MAXIMUM 30 DAY VALUE	(1) CONC.	(2) MASS	(1) CONC.	(2) MASS	(1) CONC.	(2) MASS	a. LONG TERM AVERAGE	d. NO OF ANALYSES	e. NO OF ANALYSES	
206 1,2-Dichlorobenzene [95-56-1]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
210. 1,3-Dichlorobenzene [51-73-1]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
215. 1,4-Dichlorobenzene [106-46-7]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
208. 1,3-Dibromobenzene [51-94-1]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
248. Diethyl Phthalate [84-66-2]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
252. Dimethyl Phthalate [131-11-3]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
200. Dimethyl Phthalate [131-11-3]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
270. 2-Aminobiphenyl [61-71-2]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
271. 2-Aminobiphenyl [61-71-2]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
205. 2-(4-Bromophenoxy)ethane [60-20-2]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
295. Cis-1-Dicyanohexane [117-01-0]	x	x	<20	0.0480	NA	NA	NA	NA	1	1	1	
304. 1,2-Dicyanohexane [122-66-7]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
118. Fluoranthene [205-44-0]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
220. Fluorine [73-77]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
226. Hexachlorobenzene [110-71-1]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
318. Heptachlorobenzene [91-68-3]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
328. Hexadichlorocyclohexadiene [77-41-4]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
308. Hexachloroethane [67-12-1]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
315. Indeno[1,2,3-cd]Pyrene [193-39-5]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
320. Isobutylene [78-59-1]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
208. Methylbenzene [91-20-3]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
310. Methylene [10-72-9]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
315. 1,1-Methylenedibenzene [62-75-9]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
126. 4-(4-Chlorophenyl)-Propylamine [62-1-87-7]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
345. 1-(4-Chlorophenyl)-Biphenyl [60-50-6]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
445. Phenanthrene [125-01-9]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
358. Pyrene [129-00-0]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
468. 1,2,4,1-Nichroobenzene [120-92-1]	x	x	<10	0.0240	NA	NA	NA	NA	1	1	1	
Part C - Pesticides												
2P. Aldrin [309-01-2]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
2P. alpha-BHC [19-84-6]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
3P. beta-BHC [31-25-7]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
4P. Gamma-BHC [50-08-9]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
5P. Delta-BHC [31-93-8]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
Chlordane [57-74-9]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
1P. 4,4'-DDT [50-23-3]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
2P. 4,4'-DDE [72-55-9]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
3P. 4,4'-DDD [74-54-9]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
4P. Dieldrin [51-57-1]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
1P. alpha-Endosulfan [115-29-7]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
1P. beta-Endosulfan [115-29-7]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	
1SP. Endosulfan Sulfate [1021-07-6]	x	x	NA	NA	NA	NA	NA	NA	1	1	1	

EPA ID NUMBER: LA0112B36										OUTFALL NUMBER: 201			5. INFLUX (OPTIONAL)		
1. POLLUTANT AND CAS NUMBER		2a. TESTING REQUIRED		2b. BELOVED PRESENT		2c. BELOVED ABSENT		3. EFFLUENT	4. UNITS	6. LONG TERM AVERAGE VALUE					
(1) CONC.	(2) MASS	(1) CONC.	(2) MASS	(1) CONC.	(2) MASS	(1) CONC.	(2) MASS	(1) CONC.	(2) MASS	a. CONC.	b. MASS	(1) CONC.	(2) MASS	n. NO. OF ANALYSIS	
1-P. Endrin (72-20-8)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
1,P,p-Ethoxylated (742-53-1)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
1,P,p-Triethoxylated (75-14-9)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
1,P,p-Tetraethoxylated (103-57-3)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
1,P,p-Tetraethylendioxy (253-92-9)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
1,P,p-Tetraoxy (125-41-1)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,P. PCP (111-10-7)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,P. PCB 1232 (111-14-5)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,P. PCB 1248 (126-72-29-6)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,P. PCB 1300 (111-19-6)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,P. PCB 1016 (125-74-1)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,P. Toxaphene (200-13-2)	%	A	NA	A	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	
Other parameters															
Clinorutin VI	%	A	<0.01	0.0180	NA	A	NA	NA	NA	NA	1	mg/L	mg/L	NA	
Isobutyl Ethoxylate (114-14-1)	%	A	1.37	4.3415	NA	A	NA	NA	NA	NA	1	mg/L	mg/L	NA	
3,3-dichloropropene	%	A	<10	0.0180	NA	A	NA	NA	NA	NA	1	mg/L	mg/L	NA	
4,4-dichloropropene	%	A	<10	0.0180	NA	A	NA	NA	NA	NA	1	mg/L	mg/L	NA	
2,3-dichloropropene	%	A	<10	0.0180	NA	A	NA	NA	NA	NA	1	mg/L	mg/L	NA	
2,5-dichloropropene	%	A	<10	0.0180	NA	A	NA	NA	NA	NA	1	mg/L	mg/L	NA	
2,6-dichloropropene	%	A	<10	0.0180	NA	A	NA	NA	NA	NA	1	mg/L	mg/L	NA	
3,4-dichloropropene	%	A	<10	0.0180	NA	A	NA	NA	NA	NA	1	mg/L	mg/L	NA	
2,3-Dichloropropionic acid (2,4-D)	%	-	x	x	x	A	NA	NA	NA	NA	NA	NA	NA	NA	
2,3,4,5-Tetrachlorophenoxy propionic acid (2,4,5-TP)	%	-	x	x	x	A	NA	NA	NA	NA	NA	NA	NA	NA	

NOTES:

Per phone conversation with Scott Loyd of LDEQ the effluent characteristics for Outfall 201 are reported. The proposed outlet 101 is a combination of the existing Outfalls 101 and 201.

A 24-hour composite sampling event was conducted during the period _____ for all parameters indicated above, with the exception of temperature, pH, total coliform, oil and grease, total phenols, and total residual chlorine which were collected by grab samples as well as data collected from the _____ sampling event, were used for those parameters with multiple laboratories with mass weight applicable.

A flow rate of _____ mgD was used to convert the _____ sampling event data from concentration to mass weight applicable.

All analytical results reported with a "less than" sign (<) were either (1) non-detected or able to be analytical method detection limit (MDL) achieved by the applicable laboratory analytical method, or (2) non-detectable and quantifiable at the practical quantitation limit (PQL) active.

NA = Testing not required; not applicable.

mg/L = milligrams per liter

lbs/day = pounds per day

MGD = million gallons per day

°F = degrees Fahrenheit

SI = Standard units

mg/m³ = micrograms per 1000 milliliters

Outfall 002

Historical Data for Outfall 002
Water Discharge Permit LA0112836

Monitoring Period	Flow		TOC	Oil & Grease		pH	
	Monthly Avg	Daily Max	Daily Max	Monthly Avg	Daily Max	Min	Max
	(MGD)		(mg/L)		(mg/L)	(SU)	
1/1/02 thru 1/31/02	ND	ND	ND	ND	ND	ND	ND
2/1/02 thru 2/28/02	ND	ND	ND	ND	ND	ND	ND
3/1/02 thru 3/31/02	ND	ND	ND	ND	ND	ND	ND
4/1/02 thru 4/30/02	ND	ND	ND	ND	ND	ND	ND
5/1/02 thru 5/31/02	ND	ND	ND	ND	ND	ND	ND
6/1/02 thru 6/30/02	0.926	0.926	<2.00	<5.00	<5.00	8.79	8.79
7/1/02 thru 7/31/02	0.5287	0.529	<2.00	<5.00	<5.00	7.99	7.99
8/1/02 thru 8/31/02	2.92	2.920	11.1	<5.00	<5.00	8.19	8.19
9/1/02 thru 9/30/02	0.266	0.266	4.3	<5.00	<5.00	7.2	7.2
10/1/02 thru 10/31/02	0.132	0.132	6.0	<5.00	<5.00	8.74	8.74
11/1/02 thru 11/30/02	ND	ND	ND	ND	ND	ND	ND
12/1/02 thru 12/31/02	0.0176	0.018	3.0	<5.00	<5.00	7.51	7.51
1/1/03 thru 1/31/03	0.079	0.079	2.7	<5.00	<5.00	7.8	7.8
2/1/03 thru 2/28/03	1.07	1.070	<2.00	<5.00	<5.00	7.32	7.32
3/1/03 thru 3/31/03	0.529	0.529	12.4	<5.00	<5.00	7.37	7.37
4/1/03 thru 4/30/03	1.6	1.600	5.3	<5.00	<5.00	8.35	8.35
5/1/03 thru 5/31/03	ND	ND	ND	ND	ND	ND	ND
6/1/03 thru 6/30/03	0.529	0.529	15.6	<5.00	<5.00	7.92	7.92
7/1/03 thru 7/31/03	0.937	1.08	4.0	<5.00	<5.00	7.64	7.67
8/1/03 thru 8/31/03	1.06	1.06	7.0	<5.00	<5.00	6.89	6.89
9/1/03 thru 9/30/03	0.795	1.06	4.7	<5.00	<5.00	7.41	8.5
10/1/03 thru 10/31/03	0.527	0.527	6.4	<5.0	<5.0	7.11	7.11
11/1/03 thru 11/30/03	1.06	1.06	9.2	<5.0	<5.0	7.82	7.90
12/1/03 thru 12/31/03	0.793	0.793	9.5	<5.0	<5.0	8.12	8.12
1/1/04 thru 1/31/04	1.06	1.06	<2.0	<5.0	<5.0	6.81	6.81
2/1/04 thru 2/29/04	1.06	1.06	6.2	<5.0	<5.0	6.46	6.46
3/1/04 thru 3/31/04	0.132	0.132	4.6	<5.0	<5.0	7.19	7.19
4/1/04 thru 4/30/04	1.59	1.59	12.2	<5.0	<5.0	8.27	8.27
5/1/04 thru 5/31/04	1.058	1.058	4.2	<5.0	<5.0	6.07	6.07
6/1/04 thru 6/30/04	1.59	1.59	4.2	6.4	6.4	8.33	8.33
7/1/04 thru 7/31/04	ND	ND	ND	ND	ND	ND	ND
8/1/04 thru 8/31/04	ND	ND	ND	ND	ND	ND	ND
9/1/04 thru 9/30/04	1.06	1.06	8.2	<5.0	<5.0	7.73	7.73
10/1/04 thru 10/31/04	0.264	0.264	12.8	<5.0	<5.0	7.64	7.64
Permit Limits	-	-	50	15	20	6.0	9.0

Notes:

ND = No Discharge

Bold and shaded cells exceed permit limits

Appendix B

Biomonitoring Recommendation

**BIOMONITORING FREQUENCY RECOMMENDATION
AND RATIONALE FOR ADDITIONAL REQUIREMENTS**

Permit Number: **LA0112836**

Facility Name: **Acadia Power Partners**

Previous Critical Dilution: **100%**

Proposed Critical Dilution: **97% (WET Limit)**

Date of Review: **08/22/05**

Name of Reviewer: **Kim Gunderson**

Recommended Frequency by Species:

Pimephales promelas (Fathead minnow): **Once/Quarter¹**

Ceriodaphnia dubia (water flea): **Once/Quarter¹**

Recommended Dilution Series: **31%, 41%, 54%, 72%, and 97%**

Number of Tests Performed during previous 5 years by Species:

Pimephales promelas (Fathead minnow): **12**

Daphnia pulex (water flea): **N/A – Testing of species was not required**

Daphnia magna (water flea): **N/A – Testing of species was not required**

Ceriodaphnia dubia (water flea): **22 (11 retests)**

Number of Failed Tests during previous 5 years by Species:

Pimephales promelas (Fathead minnow): **1**

Daphnia pulex (water flea): **N/A – Testing of species was not required**

Daphnia magna (water flea): **N/A – Testing of species was not required**

Ceriodaphnia dubia (water flea): **21 (17 lethal; 21 sublethal; 11 retests)**

Failed Test Dates during previous 5 years by Species:

Pimephales promelas (Fathead minnow): **Test period: 11/01/04-01/31/05**

Daphnia pulex (water flea): **N/A – Testing of species was not required**

Daphnia magna (water flea): **N/A – Testing of species was not required**

Ceriodaphnia dubia (water flea): **Test dates: 06/28/02; 07/29/02; 08/29/02; 12/06/02 (sublethal); 06/11/03 (sublethal); 08/27/03 (sublethal); 11/12/03 (sublethal); Test Periods: 02/01/04-04/30/04; 04/01/04-04/30/04; 05/01/04-05/31/04; 05/01/04-07/31/04; 08/24/04-08/30/04; 09/05/04-09/12/04; 08/01/04-10/31/04; 10/18/04-10/25/04; 11/01/04-11/30/04; 11/01/04-01/31/05;**

¹ Since a WET limit shall be incorporated into this permit, quarterly testing is required for *Ceriodaphnia dubia* and *Pimephales promelas* for the first five years following the effective date of the WET limit in the new permit. Following successful completion of this period with no demonstrated lethal or sub-lethal effects, a reduction may be appropriate.

02/01/05-02/28/05; 04/01/05-04/30/05; 05/01/05-05/31/05; and 05/01/05-07/31/05

Previous TRE Activities:

In accordance with routine compliance monitoring/sampling, a toxicity test conducted on June 28, 2002 indicated both lethal and sub-lethal effects to the *Ceriodaphnia dubia*. Subsequent retests performed in July and August, 2002 confirmed this toxicity. The toxicity resulted in the Permittee initiating a Toxicity Reduction Evaluation (TRE). On October 29, 2002, the Permittee submitted a TRE Action Plan and Schedule setting forth their proposed corrective action plan. The TRE end date was December 20, 2004. Subsequent toxicity testing from the initial failure through July, 2005 still indicates toxicity failures to the *Ceriodaphnia dubia* and once to the *Pimephales promelas*. The permittee also performed a Toxicity Identification Evaluation (TIE) which was comprised of 16 additional tests including three baseline tests, six oxidant reduction tests, one ion removal test, one carbon filtration test, and five EDTA chelation tests. The TIE analyses yielded the following results: ten tests demonstrated lethal and sublethal toxicity, one test demonstrated sublethal toxicity, and five tests indicated no toxicity and reported an NOEC value of 100% (one Ion Removal test and four EDTA chelation tests). The results of the TIE indicated that the ion exchange test removed the toxicity and the EDTA chelation test slightly reduced the toxicity. The TRE Final Report which was due December 20, 2004 has not been received as of the date of this recommendation. In March, 2005, the facility was referred to Enforcement because of their failure to submit a TRE Final Report timely. In April, 2005, LDEQ was contacted by a representative of the permittee requesting a meeting to discuss the toxicity failures and submit a final report. However, a meeting was never confirmed. On July 21, 2005, LDEQ was contacted by another representative of the permittee who stated that the facility had gone through a corporate reorganization. The permittee would like to complete their scheduled August biomonitoring tests and contact LDEQ in September to set up a meeting to discuss the toxicity failures and to submit the final report.

Additional Requirements (including WET Limits) Rationale / Comments Concerning Permitting:

Acadia Power Partners, LLC owns and Calpine Operating Service, Company, Inc. operates the Acadia Power Station, a steam electric generating facility near Eunice, Acadia Parish, Louisiana. LPDES Permit LA0112836, effective August 1, 2000, contained freshwater chronic biomonitoring as an effluent characteristic of Outfall 001 for *Ceriodaphnia dubia* and *Pimephales promelas*. The effluent series consisted of 32%, 42%, 56%, 75%, and 100% concentrations, with the critical dilution being defined as the 100% effluent concentration. The testing was to be performed quarterly for *Ceriodaphnia dubia* and *Pimephales promelas*. Biomonitoring results/data on file indicate that effluent toxicity (lethal and sublethal) is being exhibited to *Ceriodaphnia dubia* and occasionally to *Pimephales promelas* at and/or below the critical dilution with 22 failed tests for the *Ceriodaphnia dubia* and one failed test for the *Pimephales promelas* in the past five years.

FRESHWATER CHRONIC

Based on the facility's previous and/or continuing effluent toxicity problems, it is recommended that freshwater chronic biomonitoring (with a WET limit) be an effluent characteristic of Outfall 001 (discharge of 1.83 MGD of cooling tower blowdown and low volume wastewaters) in LA0112836. The effluent dilution series shall be 31%, 41%, 54%, 72%, and 97% concentrations, with 97% being defined as the critical dilution and/or WET limit. In accordance with the Environmental Protection Agency (Region 6) WET testing frequency acceleration(s), the biomonitoring frequency shall be once per quarter for *Ceriodaphnia dubia* and *Pimephales promelas*.

Additional monitoring shall be conducted upon the usage of chlorine or any biofouling agent(s).

This recommendation is in accordance with the LDEQ/OES Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies (Revised June 30, 2000), and the Best Professional Judgement (BPJ) of the reviewer.

Appendix C

Water Quality Spreadsheet and Documentation

wqsmodn.wk4 Date: 11/16 Appendix C-1
 Developer: Bruce Fielding Time: 08:13 AM
 Software: Lotus 4.0 LA0112836 / AI 83623
 Revision date: 12/13/02

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Water Quality Screen for Acadia Power Station

Input variables:

Receiving Water Characteristics:	Dilution:	Toxicity Dilution Series:
ZID FS =	0.1	Biomonitoring dilution: 0.965888
Receiving Water Name= Acadia Power Station		Dilution Series Factor: 0.75
Critical flow (Qr) cfs= 0.1	MZ FS = 1	Percent Effluent
Harm. mean/avg tidal cfs= 1	Critical Qr (MGD)= 0.06463	Dilution No. 1 96.589%
Drinking Water=1 HHNPCR=2	Harm. Mean (MGD)= 0.6463	Dilution No. 2 72.4416%
Marine, l=y, 0=n	ZID Dilution = 0.996481	Dilution No. 3 54.3312%
Rec. Water Hardness= 95.1	MZ Dilution = 0.965888	Dilution No. 4 40.7484%
Rec. Water TSS= 30.6	HHnc Dilution= 0.965888	Dilution No. 5 30.5613%
Fisch/Specific=1,Stream=0	HHc Dilution= 0.739006	
Diffuser Ratio=	ZID Upstream = 0.003532	
	MZ Upstream = 0.035317	Partition Coefficients; Dissolved-->Total
Effluent Characteristics:	MZhnhc Upstream= 0.035317	
Permittee= Acadia Power Station		METALS FW
Permit Number= LA0112836 / AI 83623		Total Arsenic 2.208888
Facility flow (Qef),MGD= 1.83	MZhhc Upstream= 0.353169	Total Cadmium 3.563989
	ZID Hardness= ---	Chromium III 5.269134
Outfall Number = 001	MZ Hardness= ---	Chromium VI 1
Eff. data, 2=lbs/day	ZID TSS= ---	Total Copper 3.531168
MQL, 2=lbs/day	MZ TSS= ---	Total Lead 6.550119
Effluent Hardness= N/A	Multipliers:	Total Mercury 2.796375
Effluent TSS= N/A	WLAa --> LTAA 0.32	Total Nickel 3.133321
WQBL ind. 0=y, 1=n	WLAc --> LTAC 0.53	Total Zinc 4.488401
Acute/Chr. ratio 0=n, 1=y 0	LTA a,c-->WQBL avg 1.31	
Aquatic,acute onlyl=y,0=n	LTA a,c-->WQBL max 3.11	Aquatic Life, Dissolved
	LTA h --> WQBL max 2.38	Metal Criteria, ug/L
Page Numbering/Labeling	WQBL-limit/report 2.13	METALS ACUTE CHRONIC
Appendix Appendix C-1	WLA Fraction 1	Arsenic 339.8 150
Page Numbers l=y, 0=n , 1	WQBL Fraction 1	Cadmium 30.11899 0.993452
Input Page # l=y, 0=n 1	Conversions:	Chromium III 526.6171 170.8292
Fischer/Site Specific inputs:	ug/L-->lbs/day Qef0.015262	Chromium VI 15.712 10.582
Pipe=1,Canal=2,Specific=3	ug/L-->lbs/day Qeo 0	Copper 17.5742 11.76777
Pipe width, feet	ug/L-->lbs/day Or 0.000834	Lead 61.14093 2.382574
ZID plume dist., feet	lbs/day-->ug/L Qeo65.52135	Mercury 1.734 0.012
MZ plume dist., feet	lbs/day-->ug/L Qef65.52135	Nickel 1356.506 150.6509
HHnc plume dist., feet	diss-->tot l=y0=n 1	Zinc 109.6777 100.1523
HHc plume dist., feet	Cu diss-->totl=y0=n 1	
Fischer/site specific dilutions:	cfs-->MGD 0.6463	Site Specific Multiplier Values:
F/specific ZID Dilution = ---	Receiving Stream:	CV = ---
F/specific MZ Dilution = ---	Default Hardness= 25	N = ---
F/specific HHnc Dilution= ---	Default TSS= 10	WLAa --> LTAA ---
F/specific HHc Dilution= ---	99 Crit., l=y, 0=n 1	WLAc --> LTAC ---
		LTA a,c-->WQBL avg ---
		LTA a,c-->WQBL max ---
		LTA h --> WQBL max ---

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(*1) Toxic Parameters	(*2) Instream Conc. ug/L	(*3) /Tech (Avg) ug/L	(*4) Effluent /Tech (Max) ug/L	(*5) MQL ug/L	(*6) 95th % estimate	(*7) Non-Tech ug/L	(*8) Acute FW ug/L	(*9) Chronic FW ug/L	(*10) HHNDW ug/L	(*11) Carcinogen Indicator ^C*
NONCONVENTIONAL										
Total Phenols (4AAP)					5		700	350	50	
3-chlorophenol					10					
4-chlorophenol					10		383	192		
2,3-Dichlorophenol					10					
2,5-Dichlorophenol					10					
2,6-Dichlorophenol					10					
3,4-Dichlorophenol					10					
2,4-Dichlorophenoxy-acetic acid (2,4-D)					---					
2-(2,4,5-Trichlorophenoxy) propionic acid (2,4,5-TP, Silvex)					---					
METALS AND CYANIDE										
Total Arsenic					10		750.5801	331.3332		
Total Cadmium					1		107.3438	3.540653		
Chromium III	200	200			10	1	2774.816	900.1217		
Chromium VI					10		15.712	10.582		
Total Copper					10		62.05746	41.55398		
Total Lead					5		400.4804	15.60615		
Total Mercury					0.2		4.848914	0.033556		
Total Nickel					40		4250.371	472.0378		
Total Zinc	1000	1000			20	1	492.2774	449.5239		
Total Cyanide	24.7	24.7			20	1	45.9	5.2	12844	
DIOXIN										
2,3,7,8 TCDD; dioxin					1.0E-005			7.2E-007		C
VOLATILE COMPOUNDS										
Benzene					10		2249	1125	12.5	C
Bromoform					10		2930	1465	34.7	C
Bromodichloromethane					10				3.3	C
Carbon Tetrachloride					10		2730	1365	1.2	C
Chloroform					10		2890	1445	70	C
Dibromochloromethane					10				5.08	C
1,2-Dichloroethane					10		11800	5900	6.8	C
1,1-Dichloroethylene					10		1160	580	0.58	C
1,3-Dichloropropylene					10		606	303	162.79	
Ethylbenzene					10		3200	1600	8100	
Methyl Chloride					50		55000	27500		
Methylene Chloride					20		19300	9650	87	C
1,1,2,2-Tetrachloroethane					10		932	466	1.8	C

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(*1) Toxic Parameters	(*12)	(*13)	(*14)	(*15)	(*16)	(*17)	(*18)	(*19)	(*20)	(*21)	(*22) (*23)
	WLAA	WLAC	WLAH	LTAa	LTAc	LTAh	Limiting	WQBL	WQBL	WQBL	WQBL Need
	Acute	Chronic	HHNDW	Acute	Chronic	HHNDW	A,C,HH	Avg	Max	Avg	MaxWQBL?
	ug/L	lbs/day	lbs/day								
NONCONVENTIONAL											
Total Phenols (4AAP)	702.4722	362.3609	51.76585	224.7911	192.0513	51.76585	51.76585	51.76585	123.2027	0.790061	1.880344
3-Chlorophenol	---	---	---	---	---	---	---	---	---	---	no
4-Chlorophenol	384.3526	198.7809	---	122.9928	105.3539	---	105.3539	138.0135	327.6505	2.10639	5.000667
2,3-Dichlorophenol	---	---	---	---	---	---	---	---	---	---	no
2,5-Dichlorophenol	---	---	---	---	---	---	---	---	---	---	no
2,6-Dichlorophenol	---	---	---	---	---	---	---	---	---	---	no
3,4-Dichlorophenol	---	---	---	---	---	---	---	---	---	---	no
2,4-Dichlorophenoxy-acetic acid (2,4-D)	---	---	---	---	---	---	---	---	---	---	no
2-(2,4,5-Trichlorophenoxy) propionic acid (2,4,5-TP, Silvex)	---	---	---	---	---	---	---	---	---	---	no
METALS AND CYANIDE											
Total Arsenic	753.2309	343.0349	---	241.0339	181.8085	---	181.8085	238.1691	565.4244	3.634984	8.62962
Total Cadmium	107.7229	3.665698	---	34.47132	1.94282	---	1.94282	2.545094	6.042171	0.038844	0.092217
Chromium III	2784.616	931.9112	---	891.0771	493.9129	---	493.9129	647.026	1536.069	9.87504	23.4438
Chromium VI	15.76749	10.95572	---	5.045597	5.806534	---	5.045597	6.609732	15.69181	0.100879	0.239491
Total Copper	62.27662	43.02154	---	19.92852	22.80142	---	19.92852	26.10636	61.9777	0.398441	0.945916
Total Lead	401.8948	16.15731	---	128.6063	8.563373	---	8.563373	11.21802	26.63209	0.171212	0.406464
Total Mercury	4.866039	0.034742	---	1.557133	0.018413	---	0.018413	0.024121	0.057265	0.000368	0.000874
Total Nickel	4265.382	488.7087	---	1364.922	259.0156	---	259.0156	339.3104	805.5385	5.178624	12.29429
Total Zinc	494.0159	465.3997	---	158.0851	246.6618	---	158.0851	207.0915	491.6447	3.160672	7.503579
Total Cyanide	46.0621	5.383648	13297.61	14.73987	2.853333	13297.61	2.853333	3.737867	8.873867	0.057048	0.135435
DIOXIN											
2,3,7,8 TCDD; dioxin	---	---	9.7E-007	---	---	9.7E-007	9.7E-007	9.7E-007	0.000002	1.5E-008	3.5E-008
VOLATILE COMPOUNDS											
Benzene	2256.943	1164.732	16.91462	722.2217	617.3077	16.91462	16.91462	16.91462	40.25679	0.258154	0.614407
Bromoform	2940.348	1516.739	46.95498	940.9113	803.8718	46.95498	46.95498	46.95498	111.7528	0.716636	1.705594
Bromodichloromethane	---	---	4.465459	---	---	4.465459	4.465459	4.465459	10.62779	0.068153	0.162203
Carbon Tetrachloride	2739.642	1413.208	1.623803	876.6853	749	1.623803	1.623803	1.623803	3.864652	0.024783	0.058983
Chloroform	2900.207	1496.033	94.72186	928.0661	792.8975	94.72186	94.72186	94.72186	225.438	1.445664	3.44068
Dibromochloromethane	---	---	6.874101	---	---	6.874101	6.874101	6.874101	16.36036	0.104914	0.249695
1,2-Dichloroethane	11841.67	6108.37	9.201552	3789.336	3237.436	9.201552	9.201552	9.201552	21.89969	0.140436	0.334238
1,1-Dichloroethylene	1164.097	600.4838	0.784838	372.511	318.2564	0.784838	0.784838	0.784838	1.867915	0.011978	0.028508
1,3-Dichloropropylene	608.1402	313.701	168.5392	194.6049	166.2615	168.5392	166.2615	217.8026	517.0734	3.324147	7.891678
Ethylbenzene	3211.301	1656.507	8386.067	1027.616	877.9488	8386.067	877.9488	1150.113	2730.421	17.55325	41.67223
Methyl Chloride	55194.24	28471.22	---	17662.16	15089.74	---	15089.74	19767.57	46929.11	301.6965	716.2414
Methylene Chloride	19368.16	9990.808	117.7257	6197.812	5295.128	117.7257	117.7257	117.7257	280.1873	1.796754	4.276274
1,1,2,2-Tetrachloroethane	935.2915	482.4577	2.435705	299.2933	255.7026	2.435705	2.435705	2.435705	5.796978	0.037174	0.088475

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(*1)	(*12)	(*13)	(*14)	(*15)	(*16)	(*17)	(*18)	(*19)	(*20)	(*21)	(*22) (*23)
Toxic	WLAA	WLAC	WLAH	LTAa	LTAc	LTAh	Limiting	WQBL	WQBL	WQBL	WQBL Need
Parameters	Acute	Chronic	HHNDW	Acute	Chronic	HHNDW	A,C,HH	Avg	Max	Avg	MaxWQBL?
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	lbs/day	lbs/day

Tetrachloroethylene	1294.556	667.7794	3.382923	414.2579	353.9231	3.382923	3.382923	3.382923	8.051358	0.051631	0.122881	no	
Toluene	1274.485	657.4263	47831.64	407.8353	348.4359	47831.64	348.4359	456.4511	1083.636	6.966447	16.53866	no	
1,1,1-Trichloroethane	5298.647	2733.237	---	1695.567	1448.615	---	1448.615	1897.686	4505.194	28.96287	68.75917	no	
1,1,2-Trichloroethane	1806.357	931.7852	9.336869	578.0343	493.8462	9.336869	9.336869	9.336869	22.22175	0.142501	0.339153	no	
Trichloroethylene	3913.774	2018.868	28.41656	1252.408		1070	28.41656	28.41656	28.41656	67.63141	0.433699	1.032204	no
Vinyl Chloride	---	---	48.44346	---	---	48.44346	48.44346	48.44346	115.2954	0.739354	1.759662	no	

ACID COMPOUNDS

2-Chlorophenol 258.9112 133.5559 130.8641 82.85158 70.78462 130.8641 70.78462 92.72785 220.1402 1.415231 3.359823 no
 2,4-Dichlorophenol 202.7134 104.567 240.8147 64.86829 55.42052 240.8147 55.42052 72.60088 172.3578 1.108049 2.630559 no

BASE NEUTRAL COMPOUNDS

Benzidine	250	8829	129.4146	0.00023	80.28254	68.58975	0.00023	0.00023	0.00023	0.000547	0.000004	0.000008	no
Hexachlorobenzene	---	---	0.000338	---	---	0.000338	0.000338	0.000338	0.000805	0.000005	0.000012	no	
Hexachlorabutadiene	5.110812	1.056023	0.148849	1.637764	0.555692	0.148849	0.148849	0.148849	0.35426	0.002272	0.005407	no	

PESTICIDES

Aldrin	3.010595	---	0.000541	0.96339	---	0.000541	0.000541	0.000541	0.001288	0.000008	0.00002	no
Hexachlorocyclohexane (gamma BHC, Lindane)	5.318718	0.217417	0.270634	1.70199	0.115231	0.270634	0.115231	0.150952	0.358368	0.002304	0.005469	no
Chlordane	2.408476	0.004452	0.000257	0.770712	0.002359	0.000257	0.000257	0.000257	0.000612	0.000004	0.000009	no
4,4'-DDT	1.103885	0.001035	0.000257	0.353243	0.000549	0.000257	0.000257	0.000257	0.000612	0.000004	0.000009	no
4,4'-DDE	52.68541	10.87083	0.000257	16.85933	5.761539	0.000257	0.000257	0.000257	0.000612	0.000004	0.000009	no
4,4'-DDD	0.030106	0.006212	0.000365	0.009634	0.003292	0.000365	0.000365	0.000365	0.00087	0.000006	0.000013	no
Dieldrin	0.238238	0.057667	0.000068	0.076236	0.030564	0.000068	0.000068	0.000068	0.000161	0.000001	0.000002	no
Endosulfan	0.220777	0.057978	0.662603	0.070649	0.030728	0.662603	0.030728	0.040254	0.095565	0.000614	0.001459	no
Endrin	0.086705	0.038824	0.269182	0.027746	0.020577	0.269182	0.020577	0.026956	0.063994	0.000411	0.000977	no
Heptachlor	0.521836	0.003934	0.000095	0.166988	0.002085	0.000095	0.000095	0.000095	0.000225	0.000001	0.000003	no

Toxaphene 0.732578 0.000207 0.000325 0.234425 0.00011 0.000325 0.00011 0.000144 0.000341 0.000002 0.000005 no

Other Parameters:

APPENDIX C-2
LA0112836 / AI 83623

Documentation and Explanation of Water Quality Screen
and Associated Lotus Spreadsheet

Each reference column is marked by a set of parentheses enclosing a number and asterisk, for example (*1) or (*19). These columns represent inputs, existing data sets, calculation points, and results for determining Water Quality Based Limits for an effluent of concern. The following represents a summary of information used in calculating the water quality screen:

Receiving Water Characteristics:

Receiving Water: Bayou Mallet
Critical Flow, Qrc (cfs): 0.1
Harmonic Mean Flow, Qrh (cfs): 1.0
Segment No.: 050103
Receiving Stream Hardness (mg/L): 95.1
Receiving Stream TSS (mg/L): 30.6
MZ Stream Factor, Fs: 1.0
Plume distance, Pf: N/A

Effluent Characteristics:

Company: Acadia Power Partners, L.L.C./Acadia Power Station
Facility flow, Qe (MGD): 1.83
Effluent Hardness (mg/L): N/A
Effluent TSS (mg/L): N/A
Pipe/canal width, Pw: N/A
Permit Number: LA0112836

Variable Definition:

Qrc, critical flow of receiving stream, cfs
Qrh, harmonic mean flow of the receiving stream, cfs
Pf = Allowable plume distance in feet, specified in LAC 33.IX.1115.D
Pw = Pipe width or canal width in feet
Qe, total facility flow , MGD
Fs, stream factor from LAC.IX.33.11 (1 for harmonic mean flow)
Cu, ambient concentration, ug/L
Cr, numerical criteria from LAC.IX.1113, Table 1
WLA, wasteload allocation
LTA, long term average calculations
WQBL, effluent water quality based limit
ZID, Zone of Initial Dilution in % effluent
MZ, Mixing Zone in % effluent

Formulas used in aquatic life water quality screen (dilution type WLA):

Streams:

Dilution Factor = $\frac{Qe}{(Qrc \times 0.6463 \times Fs + Qe)}$

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$$WLA_{a,c,h} = \frac{Cr}{\text{Dilution Factor}} - \frac{(Fs \times Qrc \times 0.6463 \times Cu)}{Qe}$$

Static water bodies (in the absence of a site specific dilution):

Discharge from a pipe:

$$\text{Critical Dilution} = \frac{(2.8) Pw \pi^{1/2}}{Pf}$$

$$WLA = \frac{(Cr-Cu) Pf}{(2.8) Pw \pi^{1/2}}$$

Discharge from a canal:

$$\text{Critical Dilution} = \frac{(2.38) (Pw^{1/2})}{(Pf)^{1/2}}$$

$$WLA = \frac{(Cr-Cu) Pf^{1/2}}{2.38 Pw^{1/2}}$$

Formulas used in human health water quality screen, human health non-carcinogens (dilution type WLA):

Streams:

$$\text{Dilution Factor} = \frac{Qe}{(Qrc \times 0.6463 + Qe)}$$

$$WLA_{a,c,h} = \frac{Cr}{\text{Dilution Factor}} - \frac{(Qrc \times 0.6463 \times Cu)}{Qe}$$

Formulas used in human health water quality screen, human health carcinogens (dilution type WLA):

$$\text{Dilution Factor} = \frac{Qe}{(Qrh \times 0.6463 + Qe)}$$

$$WLA_{a,c,h} = \frac{Cr}{\text{Dilution Factor}} - \frac{(Qrh \times 0.6463 \times Cu)}{Qe}$$

Static water bodies in the absence of a site specific dilution (human health carcinogens and human health non-carcinogens):

Discharge from a pipe:

Discharge from a canal:

$$\text{Critical Dilution} = \frac{(2.8) Pw \pi^{1/2}}{Pf}$$

$$\text{Critical Dilution} = \frac{(2.38) (Pw^{1/2})}{(Pf)^{1/2}}$$

$$WLA = \frac{(Cr-Cu) Pf^*}{(2.8) Pw \pi^{1/2}}$$

$$WLA = \frac{(Cr-Cu) Pf^{1/2}*}{2.38 Pw^{1/2}}$$

* Pf is set equal to the mixing zone distance specified in LAC 33:IX.1115 for the static water body type, i.e., lake, estuary, Gulf of Mexico, etc.

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If a site specific dilution is used, WLA are calculated by subtracting Cu from Cr and dividing by the site specific dilution for human health and aquatic life criteria.

$$WLA = \frac{(Cr-Cu)}{\text{site specific dilution}}$$

Longterm Average Calculations:

$$LTAa = WLAA \times 0.32$$

$$LTAc = WLAC \times 0.53$$

$$LTAh = WLAh$$

WQBL Calculations:

Select most limiting LTA to calculate daily max and daily avg WQBL

If aquatic life LTA is more limiting:

$$\text{Daily Maximum} = \text{Min}(LTAa, LTAc) \times 3.11$$

$$\text{Daily Average} = \text{Min}(LTAc, LTAa) \times 1.31$$

If human health LTA is more limiting:

$$\text{Daily Maximum} = LTAh \times 2.38$$

$$\text{Daily Average} = LTAh$$

Mass Balance Formulas:

$$\text{mass (lbs/day)} : (\text{ug/L}) \times 1/1000 \times (\text{flow, MGD}) \times 8.34 = \text{lbs/day}$$

$$\text{concentration(ug/L)} : \frac{\text{lbs/day}}{(\text{flow, MGD}) \times 8.34 \times 1/1000} = \text{ug/L}$$

The following is an explanation of the references in the spreadsheet.

- (*1) Parameter being screened.
- (*2) Instream concentration for the parameter being screened in ug/L. In the absence of accurate supporting data, the instream concentration is assumed to be zero (0).
- (*3) Daily average effluent value in concentration units of ug/L or mass units of lbs/day. Units determined on a case-by-case basis as appropriate to the particular situation.
- (*4) Daily maximum value in concentration units of ug/L or mass units of lbs/day. Units determined on a case-by-case basis as appropriate to the particular situation.
- (*5) Minimum analytical Quantification Levels (MQL's). Established in a letter dated January 27, 1994 from Wren Stenger of EPA Region 6 to Kilren Virdrine of LDEQ and from the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". The applicant must test for the parameter at a level at least as sensitive as the specified MQL. If this is not done, the MQL becomes the application value for screening purposes if the pollutant is suspected to be present on-site and/or in the waste stream. Units are in ug/l or lbs/day depending on the units of the effluent data.

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- (*6) States whether effluent data is based on 95th percentile estimation. A "1" indicates that a 95th percentile approximation is being used, a "0" indicates that no 95th percentile approximation is being used.
- (*7) 95th percentile approximation multiplier (2.13). The constant, 2.13, was established in memorandum of understanding dated October 8, 1991 from Jack Ferguson of Region 6 to Jesse Chang of LDEQ and included in the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". This value is screened against effluent Water Quality Based Limits established in columns (*18) - (*21). Units are in ug/l or lbs/day depending on the units of the measured effluent data.
- (*8) LAC 33.IX.1113.C.6, Table 1, Numerical Criteria for Specific Toxic Substances, freshwater (FW) or marine water (MW) (whichever is applicable) aquatic life protection, acute criteria. Units are specified. Some metals are hardness dependent. The hardness of the receiving stream shall generally be used, however a flow weighted hardness may be determined in site-specific situations using the following formula: (Effluent Hardness X ZID Dilution + Receiving Stream Hardness X (1-ZID Dilution)). Dissolved metals are converted to Total metals using partition coefficients in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Similar to hardness, the TSS of the receiving stream shall generally be used, however, a flow weighted TSS may be determined in site-specific situations using the following formula: (Effluent TSS X ZID Dilution + Receiving Stream TSS X (1-ZID Dilution)).

Hardness Dependent Criteria:

<u>Metal</u>	<u>Formula</u>
Cadmium	$e^{(1.1280[\ln(\text{hardness})] - 1.6774)}$
Chromium III	$e^{(0.8190[\ln(\text{hardness})] + 3.6880)}$
Copper	$e^{(0.9422[\ln(\text{hardness})] - 1.3884)}$
Lead	$e^{(1.2730[\ln(\text{hardness})] - 1.4600)}$
Nickel	$e^{(0.8460[\ln(\text{hardness})] + 3.3612)}$
Zinc	$e^{(0.8473[\ln(\text{hardness})] + 0.8604)}$

Dissolved to Total Metal Multipliers for Freshwater Streams (TSS dependent):

<u>Metal</u>	<u>Multiplier</u>
Arsenic	$1 + 0.48 \times \text{TSS}^{-0.73} \times \text{TSS}$
Cadmium	$1 + 4.00 \times \text{TSS}^{-1.13} \times \text{TSS}$
Chromium III	$1 + 3.36 \times \text{TSS}^{-0.93} \times \text{TSS}$
Copper	$1 + 1.04 \times \text{TSS}^{-0.74} \times \text{TSS}$
Lead	$1 + 2.80 \times \text{TSS}^{-0.80} \times \text{TSS}$
Mercury	$1 + 2.90 \times \text{TSS}^{-1.14} \times \text{TSS}$
Nickel	$1 + 0.49 \times \text{TSS}^{-0.57} \times \text{TSS}$
Zinc	$1 + 1.25 \times \text{TSS}^{-0.70} \times \text{TSS}$

Dissolved to Total Metal Multipliers for Marine Environments (TSS dependent):

<u>Metal</u>	<u>Multiplier</u>
Copper	$1 + (10^{4.86} \times TSS^{-0.72} \times TSS) \times 10^{-6}$
Lead	$1 + (10^{6.06} \times TSS^{-0.85} \times TSS) \times 10^{-6}$
Zinc	$1 + (10^{5.36} \times TSS^{-0.52} \times TSS) \times 10^{-6}$

If a metal does not have multiplier listed above, then the dissolved to total metal multiplier shall be 1.

- (*9) LAC 33.IX.1113.C.6, Table 1, Numerical Criteria for Specific Toxic Substances, freshwater (FW) or marine water (MW) (whichever is applicable) aquatic life protection, chronic criteria. Units are specified. Some metals are hardness dependent. The hardness of the receiving stream shall generally be used, however a flow weighted hardness may be determined in site-specific situations using the following formula: (Effluent Hardness X MZ Dilution + Receiving Stream Hardness X (1-MZ Dilution)). Dissolved metals are converted to Total metals using partition coefficients in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Similar to hardness, the TSS of the receiving stream shall generally be used, however, a flow weighted TSS may be determined in site-specific situations using the following formula: (Effluent TSS X MZ Dilution + Receiving Stream TSS X (1-MZ Dilution)).

Hardness dependent criteria:

<u>Metal</u>	<u>Formula</u>
Cadmium	$e^{(0.7852[\ln(\text{hardness})] - 3.4900)}$
Chromium III	$e^{(0.8473[\ln(\text{hardness})] + 0.7614)}$
Copper	$e^{(0.8545[\ln(\text{hardness})] - 1.3860)}$
Lead	$e^{(1.2730[\ln(\text{hardness})] - 4.7050)}$
Nickel	$e^{(0.8460[\ln(\text{hardness})] + 1.1645)}$
Zinc	$e^{(0.8473[\ln(\text{hardness})] + 0.7614)}$

Dissolved to total metal multiplier formulas are the same as (*8), acute numerical criteria for aquatic life protection.

- (*10) LAC 33.IX.1113.C.6, Table 1, Numerical Criteria for Specific Toxic Substances, human health protection, drinking water supply (HHDW), non-drinking water supply criteria (HHNDW), or human health non-primary contact recreation (HHNPCR) (whichever is applicable). A DEQ and EPA approved Use Attainability Analysis is required before HHNPCR is used, e.g., Monte Sano Bayou. Units are specified.
- (*11) C if screened and carcinogenic. If a parameter is being screened and is carcinogenic a "C" will appear in this column.
- (*12) Wasteload Allocation for acute aquatic criteria (WLAA). Dilution type WLAA is calculated in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Negative values indicate that the receiving water is not meeting the acute aquatic numerical criteria for that parameter. Units are in ug/L.

Dilution WLAA formulas for streams:

$$\text{WLAA} = (\text{Cr/Dilution Factor}) - \frac{(\text{Fs} \times \text{Orc} \times 0.6463 \times \text{Cu})}{\text{Qe}}$$

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Dilution WLAa formulas for static water bodies:

$$WLAa = (Cr-Cu)/Dilution Factor)$$

Cr represents aquatic acute numerical criteria from column (*8).

If Cu data is unavailable or inadequate, assume Cu=0

- (*13) Wasteload Allocation for chronic aquatic criteria (WLAc). Dilution type WLAc is calculated in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Negative values indicate that the receiving water is not meeting the chronic aquatic numerical criteria for that parameter. Units are in ug/L.

Dilution WLAc formula:

$$WLAc = (Cr/Dilution Factor) - \frac{(Fs \times Orc \times 0.6463 \times Cu)}{Qe}$$

Dilution WLAc formulas for static water bodies:

$$WLAc = (Cr-Cu)/Dilution Factor)$$

Cr represents aquatic chronic numerical criteria from column (*9).

If Cu data is unavailable or inadequate, assume Cu=0

- (*14) Wasteload Allocation for human health criteria (WLAh). Dilution type WLAh is calculated in accordance with the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards". Negative values indicate that the receiving water is not meeting the human health numerical criteria for that parameter. Units are in ug/L. Dilution WLAh formula:

$$WLAh = (Cr/Dilution Factor) - \frac{(Fs \times Orc, Orh \times 0.6463 \times Cu)}{Qe}$$

Dilution WLAh formulas for static water bodies:

$$WLAh = (Cr-Cu)/Dilution Factor)$$

Cr represents human health numerical criteria from column (*10).

If Cu data is unavailable or inadequate, assume Cu=0

- (*15) Long Term Average for aquatic numerical criteria (LTAa). WLAa numbers are multiplied by a multiplier specified in the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards" which is 0.32. WLAa X 0.32 = LTAa

- (*16) Long Term Average for chronic numerical criteria (LTAc). WLAc numbers are multiplied by a multiplier specified in the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards" which is 0.53. WLAc X 0.53 = LTAc

- (*17) Long Term Average for human health numerical criteria (LTAh). WLAh numbers are multiplied by a multiplier specified in the "Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards" which is 1. WLAh X 1 = LTAh

- (*18) Limiting Acute, Chronic or Human Health LTA's. The most limiting LTA is placed in this column. Units are consistent with the WLA calculation.

- (*19) End of pipe Water Quality Based Limit (WQBL) maximum 30-day daily average in terms of concentration, ug/L. If aquatic life criteria was the most limiting LTA then the limiting LTA is multiplied by 1.31 to determine the average WQBL ($LTA_{limiting\ aquatic} \times 1.31 = WQBL_{daily\ average}$). If human health criteria was the most limiting criteria then

$$LTAh = WQBL_{daily\ average}$$

- (*20) End of pipe Water Quality Based Limit (WQBL) 30-day daily maximum in terms of concentration, ug/L. If aquatic life criteria was the most limiting LTA then the limiting LTA is multiplied by 3.11 to determine

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the daily maximum WQBL ($LTA_{limiting\ aquatic} \times 3.11 = WQBL_{daily\ max}$). If human health criteria was the most limiting criteria then LTA_h is multiplied by 2.38 to determine the daily maximum WQBL ($LTA_{limiting\ aquatic} \times 2.38 = WQBL_{daily\ max}$).

- (*21) End of pipe Water Quality Based Limit (WQBL) maximum 30-day daily average in terms of mass, lbs/day. The mass limit is determined by using the mass balance equations above. Daily average WQBL, ug/l/1000 X facility flow, MGD X 8.34 = daily average WQBL, lbs/day.
- (*22) End of pipe Water Quality Based Limit (WQBL) 30 day daily maximum in terms of mass, lbs/day. Mass limit is determined by using the mass balance equations above. Daily maximum WQBL, ug/l/1000 X facility flow, MGD X 8.34 = daily maximum WQBL, lbs/day.
- (*23) Indicates whether the screened effluent value(s) need water quality based limits for the parameter of concern. A "yes" indicates that a water quality based limit is needed in the permit; a "no" indicates the reverse.